

THE JUNE AMERICAN BUILDER will be an unusual issue—entire contents on one subject, "How to Plan, Sell and Build Better Homes and Home Improvements."

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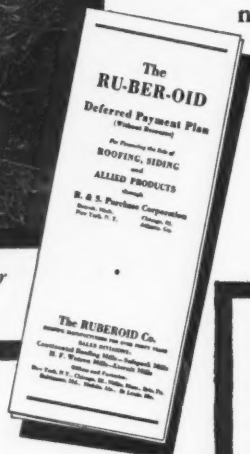


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## AMERICAN BUILDER AND BUILDING AGE

# Reasonable Costs Necessary to Home Building Revival

**G**REAT news for the home building industry is coming out of Washington these days—news of plans being perfected to assure plenty of low-cost, long-term money for home building and repairs, and news of a great patriotic drive backed by the Administration to urge the home owners and the home seeking public to improve their homes and to build now.

This is the official support which industry leaders have been seeking. They have advanced the sound arguments that unemployment should be combated where most severe, namely, among the building trades and allied industries, and have pointed out that home improvements are so universally needed today throughout the nation as to indicate that here is the much sought outlet for the nation's surplus energy, which will help restore employment in the capital goods industries and make recovery certain.

### How Will Builder, Dealer and Craftsman Respond?

Such important help from the Government should spur every individual engaged in building or connected in any way with the building industry, to study his own local situation to see how he can contribute to the success of this great nation-wide movement for more and better home building. There is something here for every man to do—from highest to lowest. As an industry, home building is entirely unorganized; yet in this movement the building interests of every city, town and community will have to develop leadership and organize to do, first, an intelligent selling job with the public; second, a sound planning and financing job, on contracts secured; and third, an efficient construction job—assuring the home seeking public of real and lasting value for its investment.

### Prices and Wages—Are They Right?

In facing this opportunity of co-operating with the President of the United States in rebuilding America, let's be frank about building costs.

"With today's cost of building a two-story frame dwelling at 88.4 per cent of the 1928 all-time high in building costs, consumer demand is being rebuffed rather than stimulated," declares Morton Bodfish, building and loan league executive. He presents a tabulation of costs of seventeen different factors in home construction, all the way from excavating to painting and decorating, for

1925, 1928, May, 1933, and at the present time, which shows that the past ten months have seen a 27 per cent increase in building costs, so that a home which could be built for \$3,696 last May would cost \$4,713 this year. It would have been priced at \$5,336 in 1925 and \$5,410 in 1928, so that the cost of such construction is now only about 11 per cent off from the peak prices.

If the way out of depression is through expanded consumer demand, it is obvious that the expansion of demand will come about most naturally through low prices, low enough to permit an ever widening circle of income groups to enter the market. The experience of the automobile industry when it started mass production and lowered cost is a telling evidence of this.

What the building industry needs to restore profits and satisfactory conditions of employment is a large increase in the volume of construction work, and business or labor union policies which unduly raise prices or labor costs before the revival of building has got well under way will seriously hinder the needed increase in the volume of construction.

By a generous policy of lending, the government can reduce interest rates and make payment of installments of principal easier, but the cost of money is only one of the costs of improving or building homes.

### Let's Make 1934 a Bargain Time to Build

Even with the most powerful and persuasive government backing the home building and home repair campaign can have little success unless supported intelligently by manufacturers, dealers, contractors and labor leaders with fair prices, fair wages and efficient service. The owner can so easily nullify the whole effort by simply refusing to buy!

On the other hand, if owners can really be shown that now is the *bargain time to build* both as to price and patriotism, it will mean a great revival of employment and of business.

Any merchant should prefer a small profit on many sales to a big profit on a few; and any workman should prefer steady employment at a fair wage to idleness and uncertainty under a wage rate so high that the buyers refuse to hire.

"Better Homes—Better Business" now looms as the industry's great opportunity; but it will require organization, salesmanship and fair dealing to develop its full power. Building prices must be kept down.



# Details of President's Plan for

*HOME BUILDING (or Small Construction Industry) recognized as major factor in reemployment and business recovery—*

*GOVERNMENT GUARANTEE of mortgages to assure ample funds for needed new home building, repairs and remodeling—*

*"LIBERTY LOAN" DRIVE to encourage home owners to make improvements now—*

SINCE early in April reports have been filtering out of Washington of vast plans for the financing and stimulation of a nation-wide home building and repair activity. Before the President went on his Florida fishing trip he asked the Emergency Council planning committee to draft a bill covering the following points:

1. Modernization of houses that are worth modernizing.

2. Stimulation of new home construction "that can be justified economically."

3. Demolition of obsolete structures by discouraging repairs and encouraging new construction.

4. Repair and replacement of industrial structures.

On April 20 announcement was made, following a White House Conference participated in by Secretary of the Treasury Morgenthau, Secretary of Commerce Roper, Secretary of the Interior Ickes, Secretary of Agriculture Wallace, Secretary of Labor Perkins, Attorney-General Cummings, NRA Administrator Hugh S. Johnson, Frank C. Walker, executive director of the Executive Council, Jesse Jones, chairman of RFC, and Lew Douglas, director of the budget, that the Administration will make an intensive effort to persuade home owners to spend \$1,500,000,000 on home renovation.

Details of further provisions of the President's plan to provide financing and stimulation for needed new home building have since been confidentially circulated among administration and industry leaders; and it is asserted that some 200 Congressmen have pledged to vote for this legislation.

At this writing, April 25, an official release from the White House is momentarily expected; and until the program is actually passed by Congress the final details are of course uncertain. However, in its broad outline, the plan shapes up as follows:

## Home Owner Will Get the Breaks

As now outlined the new program will practically revolutionize present mortgage financing practices, and if put into effect in its present form will for the first time give the prospective home owner a good break in the form of mortgage rates and amortization payments. It should result in the participation of all banking interests and should open the mortgage field to an extent far beyond that which industry leaders have anticipated and have been working for.

Listed herewith are the salient features of the home modernizing and new home financing proposals:

1. The principle of financing such work on the basis of "Consumer Credit"; in other words, *installment buy-*

*ing* is first established, based entirely on the home owner's ability and willingness to pay, but *not involving the real estate as security.*

2. *Financing* by three groups.

Commercial and Savings Banks.

Finance and Acceptance Corporations.

Building and Loan Associations.

3. Lending agencies insured against loss through a *central insurance agency* set up by Federal Government (see under Mortgage Financing, New Residential Construction).

4. Put on a nation-wide *modernizing* campaign through a central committee and decentralized sub-committees of local architects and others familiar with building problems and costs.

5. In order to qualify for loss insurance all *modernizing loans* should meet the following requirements:

Minimum loan \$200; maximum \$2,000.

To be repaid in monthly or quarterly installments except by those engaged in agriculture, then may be based on crop income dates.

Minimum monthly payment \$10; maximum term 5 years.

Total interest 5 per cent.

Schedule of service charges set up for discounting agencies (contractors must absorb).

Maximum insurance coverage to lending agency 20 per cent.

Loans must otherwise live up to credit standards set up by central insurance agency.

6. *Rediscount facilities.* Set-up will provide facilities for rediscounting modernizing loans at a fixed rate of 3 per cent true interest per annum.

## Mortgage Financing (New Residential Construction)

1. *Objectives:*

To provide a new mortgage instrument that will (a) afford ample security to private lending institutions, (b) lower the cost of mortgage money to the borrower, and (c) eliminate the need for second mortgage financing.

To provide genuine liquidity for new mortgage instruments that have these essential characteristics.

2. *Federal Mutual Mortgage Insurance Corporation.*

The above set-up will have a Board of Directors identical with the membership of the Federal Home Loan Bank Board, authorized to insure the full payment of all eligible home mortgages and to insure also a minimum interest return (in general 3 per cent on insured mortgages that may default.)

Any mortgagee acceptable to the Board may insure mortgages under this plan.

It is expected that all private lending agencies will take advantage of these insurance features. (Savings banks, commercial banks, trust companies and other trustees, insurance companies, building and loan associations, mortgage companies, etc.)

A national standardized system of appraisal practice will be developed.

*Construction standards will be developed.*

3. Mortgage insurance qualifications.

- (a) Mortgage must be a first lien on dwelling designed for occupancy of not more than four families.

- (b) Must provide for amortization in not less than 20 years, except in exceptional cases where 30 years is provided.

- (c) Must conform to standards, in respect to char-



# Pushing New Building and Repairs



FRANK C. WALKER, Director National Emergency Council and Chairman of Planning Committee for Home Construction, Finance and Stimulation. He will probably head the President's "Rebuild America" drive.

acter and income of mortgagor, as may be established by Board.

(d) Must be single mortgage not in excess of 80 per cent of value of property.

(e) Net interest return to lender of not more than 5 per cent.

4. Realization of insurance. Mortgagee under the plan retains right to foreclose or not, but if he elects to realize on his insurance the Board will deliver to him *debentures* equal to the unpaid principal of the mortgage which mature three years after the mortgage would have been paid off if it had remained in good standing. Provision is made to give the mortgagee a preferred certificate up to a maximum of 10 per cent of the unpaid principal of the mortgage covering expenses incurred because of delinquency and foreclosures, which certificate will be paid off when the Board has realized on the property and paid off the debentures.

5. Cost of mortgage insurance.

One per cent per annum of the original face value of the mortgage to be remitted to the insurance corporation through the mortgagee.

This premium being in excess of the amount of risk ordinarily involved will eventually be returned to the

mortgagor. For example, a 20-year mortgage in good standing would build up at the end of 17 years an insurance reserve sufficient to retire at that time the remaining unpaid principal of the mortgage after certain deductions for a general reinsurance fund are made.

The insurance premium therefore covers both insurance risk and additional but unspecified amortization.

The annual total charge on a 20-year mortgage yielding 5 per cent to the lender would, including interest, amortization and insurance, equal 9 per cent of the original face value of the loan. This is considerably less than the present combined cost of first and second mortgage money.

6. *Insurance of public or semi-public projects.* Separate insurance funds will be set up to handle mortgages on low cost housing and slum clearance projects.

7. *To create liquidity in the home mortgage field* and to assist in making new mortgage money available, it is proposed further:

(a) To amend the Federal Banking Laws to permit construction loans on projects of a type likely to be accepted as eligible for Federal mortgage insurance.

(b) To amend the Federal Banking Laws to permit member banks of the Federal Reserve System to hold mortgages up to 80 per cent of the appraised value of the mortgaged property and of a maturity longer than five years, provided the mortgages are insurable.

(c) To Amend the Home Loan Bank Act as follows:  
To remove the present restrictions on amounts that can be loaned to any one institution.

To permit the Home Loan Banks to rediscount mortgages insured under the Mutual Mortgage Insurance Act up to their full face value.

To permit the Home Loan Banks in exceptional circumstances to make advances on the notes of their members to provide liquidity for mortgage agencies during a run.

(d) To encourage amendments to state laws covering mortgage institutions to bring such laws in conformity with the provisions of the Federal Mutual Mortgage Insurance Act.

8. *Incorporation of Federal Mortgage Associations.* Provision is made for the formation of these associations which are expected to finance themselves directly by the sale of their own bonds in the investment markets. They will be chartered by the Federal Home Loan Bank Board with a minimum paid in capital of five million dollars, and may issue bonds up to 15 times their capital. All bonds will be covered by mortgages insured with the Federal Mutual Mortgage Insurance Corporation.

## Expect Presidential Action Soon

The President is scheduled to review this completed program and his approval is confidently expected. There is some question whether the new bill will be immediately sent to Congress or whether it will be withheld temporarily until the present legislative snarl is straightened.

As a result of past work with the various Departments interested in housing and mortgage financing and members of Congress, industry leaders believe that this program will have wide-spread support. There is said to be an authentic list of some 200 Congressmen pledged to vote for legislation of this nature, and as soon as the completed bill is available the attitude of the men of the building industry will again be brought to the attention of Congress.

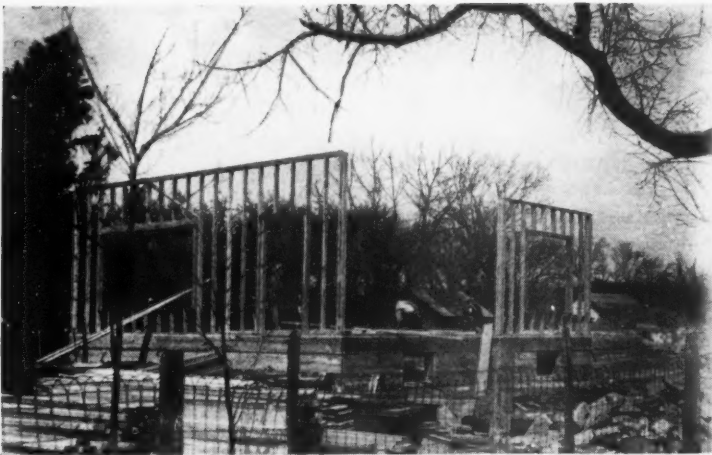
# CURRENT HOME BUILDING

## A Review of What Builders Are Doing This Spring

By JOSEPH B. MASON



H. L. MOREHEAD, general contractor, left, and M. A. Augustine, plastering contractor, in front of \$15,000 house, under construction in Cedar Rapids, Ia. Extra heavy backing is provided for stucco exterior. House is thoroughly insulated.



FRANK THIERS, BUILDER OF FINE RESIDENCES, is seen at work on new modern farm home outside Ottawa, Ill. A gasoline-operated light and water system is to be installed. Materials supplied by L. M. Bayne Lumber Co.



BOB McINTYRE, YOUNG CONTRACTOR of Cedar Rapids, Ia., (seated above) is building the attractive small home shown at right to sell for \$4950. Blanket insulation, Airflow forced warm air heating system and cinder concrete backing are used.



EVERY house under construction this spring is a bellwether of current construction practice. People constantly stop to inquire what the new materials being used are; they ask about the heating plant, insulation, want to know how the house is financed, who is doing the work, who is buying the materials.

Houses under construction this spring are doubly important to the building industry because they not only advertise the rebirth of home building but point the direction in which such practice is moving.

The following brief review of current building practice is made as the result of an 800-mile trip in mid-April through several Midwestern states. The surprising fact was immediately apparent that more new homes are being built than men in the building industry themselves are aware.

"How's business?" I would ask a lumber dealer. "Any houses under construction?" The answer was usually, "Terrible—none."

"What, no houses at all going up?" I would persist.

"Well, of course, there is that house Bill Jones is building up on the Heights. And we sent a load of material out to the Smith place last week for a modernizing job—"

On further questioning, it usually developed that there were several houses under construction. Often one dealer in a town would not admit he knew of any houses being built; yet his

neighbor down the street would not only tell of several but would prove to be the man who supplied the materials. Many dealers have become so accustomed to saying business is bad that they still say so although their books show a really marked business improvement.

Is a change taking place in the established methods of handling home construction? Not in the area covered by this trip. Some thirty houses under construction or recently finished were photographed, and in all but one, materials were furnished by local lumber and material dealers. If "factory-built" houses are threatening the industry, as some claim, they have not reached this section.

Of the thirty houses photographed, twenty-five were promoted and sold by local contractors and builders. In each case the local contractor originated the job, persuaded the owner to build, handled all the details, controlled the purchase of materials and superintended the job. Architects were employed on eight of the houses, although on several of these the architect served in an advisory or consultant capacity only. By far the majority of the houses I visited were under construction as the result of the industrious cultivation of the prospect by an enterprising builder. He usually had been working on this prospect for a long time. Often the prospect was a friend, relative, or a friend of a friend. Long hours had been spent by the contractor, in most cases, working out the details, helping the prospect figure how he could finance the job, helping him plan the arrangement to suit his needs.

An interesting illustration of how jobs are developed in today's market is shown by the work done by Contractor Theodore Kintzle of Dubuque. He had built a \$38,000 house for a client ten years ago. This man was recently a prospect for a new house. Kintzle discussed a variety of plans and projects, finally ending up by driving over to A Century of Progress to examine a house which had caught the eye of the customer. In the end he sold the job, modifying the design and the construction details to suit the owner and the locality. Today the house is about two-thirds completed—a modern, comfortable home built with materials supplied by the local lumber company to cost about \$15,000. In livability, it will be easily the equivalent of the more expensive house built ten years ago. (A picture of this house is shown on page 23.)

In Cedar Rapids, Ia., R. S. (Bob) McIntyre, a young contractor who is making progress, completed a house



THIS ATTRACTIVE FIREPLACE was designed and is now under construction by M. D. McCreedy, contractor and builder of Iowa City, Ia. Note the simplified interior with narrow trim, at windows.



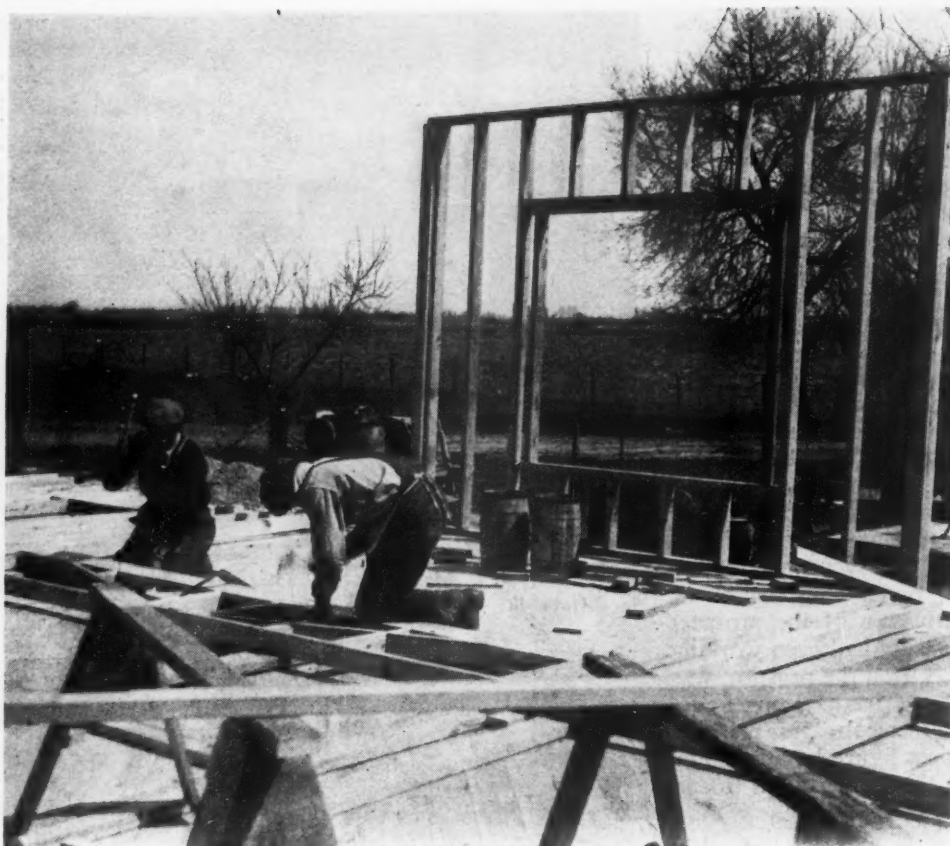
NEW FOUNDATION, A NEW FRONT PORCH and exterior refinishing are included in work going ahead on this house at Cascade, Ia. Considerable modernizing work is going ahead in Iowa and Illinois.

for a railroad employee last November. He sold the job for \$3,000—a five-room house of cinder concrete block with stucco exterior, forced warm air heating, good composition shingle roof, modern plumbing and modern

A "DRY INTERIOR" is the feature of this new home just being completed at Rockford, Ill., by Contractor J. H. Thomas. It was designed by Willis W. Hubbard, architect. Interior walls are of gypsum board with armored joints covered with canvas.







An action picture of Frank Thiers, contractor, (left) and helper nailing side wall framing on farm house near Ottawa, Ill. Wall was erected a few moments later. Window frames are cut before wall is erected.

kitchen. As soon as the weather permitted this spring, he started work on another house, (shown on page 20) which he planned to be especially attractive, to sell for \$4,950. Before it was more than well started, he had a number of inquiries, and sold the job. This house is of brick exterior with cinder concrete backing. Blanket type insulation is used. A warm air "Airflow" furnace is to be installed—a type McIntyre is enthusiastic about. The plan is unusually efficient. McIntyre says he is "Scotch" and it is his careful buying and attention to details that save cost without cutting quality that makes him able to offer such a thoroughly modern, well built house under \$5,000.

McIntyre believes the contractor should offer a complete service to the customer, should plan his work so as to keep a small crew busy all year round. He favors licensing of contractors to insure better conditions and more honest workmanship. Above all, he declares the contractor cannot and should not sell houses on cost alone; he should sell on the basis of new ideas, material and equipment, and on new and efficient construction methods.

Another Cedar Rapids contractor, H. L. Morehead of the firm of Morehead & Fredrickson, has ideas on the service the contractor should give. I talked with Morehead out on the job where a fine \$15,000 house was nearing completion. This house, of frame construction, had just been covered with a heavy asphalt-saturated building paper over which an extra heavy diamond-shaped metal lath was applied as the base for the stucco exterior. Lok-joint insulating plaster had just been applied inside, and additional insulation was given by use of rock wool. I found this type of insulation used in a large number of the houses under construction.

Concerning a complete home building service, Morehead pointed out that his firm also includes complete and expert landscaping, which work is the especial concern of his partner, J. P. Fredrickson. Like most contractors

today, Morehead has had architectural training, and works out the plans for the houses he builds in conjunction with the prospect. However, after the customer has signed the contract, a local practicing architect is called in as a consultant, and he advises on the architectural and artistic features of the plans.

Home building in Cedar Rapids was getting off to a fairly brisk start. On the morning of April 10 I found three houses under way within a block of each other. Two \$15,000 homes were being started by McKay Construction Company. The feeling of optimism and activity this work produced permeated the whole community.

An active contracting firm is that of Smith & Burger at Iowa City, Ia. They have been building houses right along through the depression. I visited Mr. Burger out on a \$7,000 job on Lexington avenue. This house is illustrated on our front cover, and is of sturdy frame construction, concrete foundation, Celotex plaster base, brick veneer exterior, 7-rooms and bath. Smith handles the estimating and planning, while Burger, with a thorough carpenter training, is the active man on the job. Both are long time readers of the *AMERICAN BUILDER*, I learned, as are Kintzle, McIntyre, Morehead and most of the active builders I interviewed who are handling jobs in today's market.

Several trends in home building were apparent in the construction visited. In nearly every house, forced warm air heating systems were found. These varied all the way from inexpensive hot air furnace types to complete air conditioning units. In a \$12,000 house nearing completion in Keokuk, Ia., by Contractor August Nast, a \$1,000 conditioned air unit was being installed which washes, filters and circulates the air in conjunction with an automatic oil burning furnace.

"Dry construction" was found to be on the increase. In Rockford an attractive brick house was being finished by Contractor J. H. Thomas in which gypsum board interiors had been provided throughout. An armored joint concealed the cracks between boards, and over the entire surface a light canvas material had been applied. By eliminating plaster the harmful introduction of quantities of water into the house was avoided, and it was possible to finish the interior during cold weather. An interesting feature of this house was the monel metal kitchen equipment in modern fashion similar to the kitchens that attracted so much attention at A Century of Progress.

In interior finishing, the trend toward narrow trim or the complete elimination of trim was noted. Several houses in Keokuk used a new type of metal door casing

(Continued on page 65)



## 1934 HOUSES UNDER WAY

NEW HOUSES OF 1934 are making their appearance. (1) Contractor Burger of the firm of Smith & Burger is seen on the job on a \$7,000 house at Iowa City. (2) Brick house at Keokuk, Ia., being built by Atterbery & Fonda. (3) McKay Construction Co. places concrete for \$15,000 house at Cedar Rapids. (4) Theodore Kintzle, carpenter-contractor of Dubuque, builds a \$16,000 modern home like one he saw at Fair.



# HOW TO ADVERTISE PROFITABLY

You Can Use These Sales Letters  
and Ideas NOW To Create Build-  
ing Work. An Advertising Expert  
Tells How

By A. J. PEEL

Vice President, The S. A. Conover Company, Boston

**T**HE Building Construction industry has its code. It remains to be seen just what is going to be the effect on business; how the public will react to increased building costs; and what success will be achieved in enforcing the provisions of the Code in the general contracting field and in allied trades.

Under the new conditions, does it pay to advertise? The advertising building contractor is still something of a novelty. Many do not advertise because they sincerely believe that advertising for building contractors is quite impractical. "Ninety per cent of our work comes through friends." "A building contractor is never selected through the advertising columns of newspapers, magazines; or because he has sent letters to prospective buyers of his service." "We have nothing to sell but service."

**AMERICAN BUILDERS** INC.

**BUILDING CONSTRUCTION**

14 EAST 22<sup>ND</sup> ST. NEW YORK CITY      Phone: GR 3-3371

☐ You may send a representative to submit an estimate on alterations we contemplate.

☐ You may call to submit preliminary costs and suggestions on alteration work we have under consideration.

Name \_\_\_\_\_

Firm \_\_\_\_\_

Address \_\_\_\_\_ City and State \_\_\_\_\_

ALWAYS ENCLOSE A RETURN CARD in letter asking for business. Here is a typical card with excellent wording, self-addressed.

## *This letter to hotel owners*

Dear Sir:

Probably you are aware of the structural alterations which have just been completed at the.....Hotel in..... This work consisted in the removal from the entire front, of the first two stories; remodeling the entrance; and constructing a new lobby.

This is the most recent example of the type of work we have been doing exclusively in.....for the past twelve years. Among other hotel buildings we have remodeled, are the following:

(List of hotels)

With definite signs of revival in the hotel industry you may possibly be contemplating similar structural alterations in your hotel building. If it would be of assistance to you to have us survey the proposed work, advise as to its practicability, and furnish you with an estimate of the cost, we would be very pleased to do this for you without cost or obligation.

Our long experience in this special type of work enables us to advise our clients just how much work is involved in the proposed alterations and remodeling, and in many cases we have been able to suggest practical ways and means whereby the same results have been attained at considerable saving of expense. Only an intimate knowledge of remodeling and alteration problems, successfully solved, can lend authority and reliability to such service.

Our construction service is well-known and appreciated by many prominent.....architects, some of whom call on us repeatedly to carry out alterations and remodeling for their clients. For work that does not require architectural service we are well-equipped to undertake full responsibility, from the initial survey to the completed undertaking.

We would appreciate the privilege of discussing with you any problem of structural alterations that you may have in mind for the near future.

Yours very truly

**LETTER #1**

*(Your name here)*

THIS LETTER WAS ESPECIALLY PREPARED to secure hotel improvement and alteration work, of which a good volume is going ahead.

... These are some of the arguments used by building contractors when approached on the subject of advertising; and they appear to be sound and reasonable. There is just this to be said in reply, however: advertising has sold and does sell building service in spite of apparently good reasons why it shouldn't.

There is considerable misapprehension on the part of the general contracting field as to the purpose of advertising; and this is not remarkable in view of the fact that such misunderstanding exists in many other industries. A real estate agent advertises properties for sale or lease, and he gets results in the form of inquiries. A manufacturer of plumbing fixtures advertises to architects and builders, and he gets orders. But these are concrete things, as concrete as breakfast food, cigarettes, or canned goods. But the industry which by its labor creates the finished product marketed by the real estate agent—buildings—sells only a service by which varied materials and a multitude of manufactured products are worked into a unit—a completed building. The answer to this argument is that advertising seldom sells buildings, plumbing equipment and fixtures, lumber, or, in fact, anything. It is never intended to. *Advertising opens doors, and having accomplished this, it is up to the salesman to sell whatever is for sale.* This is as true of building service as it is of soup or skis. If the building contractor, through advertising, can open the door to an architect's office, to the office of a hotel proprietor, to a prospective home builder or anybody else interested in purchasing building service, then the contractor's advertising has justified itself, it has fulfilled its purpose. Can this be done? Has it been done? It can, and it has.

But what kind of advertising brings results for the builder? This, of course, is all-important. The conven-



## Follow up with this

Dear Sir:

A recent letter which we addressed to the hotel field regarding our service in carrying out building alterations, remodeling or modernization of existing buildings or rooms, brought in requests from hotel owners or managers to submit estimates for work of this character, after surveying their premises.

On every hand we hear of greatly stimulated business in the hotel field due to Repeal and an increased inclination on the part of people to dine out in leisure and comfort. Many hotels are expanding their dining room facilities, increasing dance floor accommodation, remodeling banquet and ball rooms...all of which involves specialized construction service.

Our long experience in this type of alteration work enables us to furnish quick and reliable estimates of contemplated work; and our permanent force of skilled workmen ensures the job being carried out expeditiously and economically.

No job is too small or too large for us to carry through, and we are ready to start work without delays.

You probably are aware that costs of building materials are continuing to advance and there is little prospect that there will be a fall in material prices. The materialization of better business in your field should justify a sound investment in building alterations, if needed to meet the new opportunities, and the time to consider this is NOW.

We shall be happy to send a representative to see you and figure on possible structural alterations you may have in mind.

Yours very truly

(Your name here)

## LETTER #2

## This letter to real estate agents

Dear Sir:

The leasing of properties or space in office buildings is often contingent on the cost of making minor structural alterations, partitioning, putting in or removing mezzanines, or other work of similar character. If it is your practice...as it is with many renting agents and building managers...to amortize the cost of this work over the rental period, you will realize the necessity of being fortified with a fairly accurate idea of the costs of different types of work of this nature.

For many years we have been specializing in building alterations in \_\_\_\_\_, both interior and exterior, and it is this wide experience that enables us to give prompt and close estimates to help you to lease the property or space at your disposal with the full assurance that you are safely covered for the cost of required alterations.

It is also necessary that such work as is required by the tenant should be carried out with speed: Our organization is such that we can start any minor alteration job within a few hours' notice and complete it in time for the tenant to occupy the space or building within the time agreed upon.

Our specialized service covers the erection of fireproof partitions and walls.

We shall be very happy to co-operate with you by furnishing accurate costs of all types of minor and major structural alterations, partitioning, or modernizing that may be necessary to lease properties or space to desirable tenants; and we hope you will give us the opportunity of serving you in this respect.

Yours very truly,

(Your name here)

## LETTER #3

LETTER NO. 2 IS A FOLLOW UP OF NO. 1—CLEVERLY WRITTEN to re-emphasize the service offered by the contractor. Letter No. 3 was sent to real estate agents and property managers soliciting building alterations to increase rentals.

tional "card" by which a building contractor merely announces the fact that he has his sign hanging out, is just waste of good money. Of course nobody buys building service on this basis, unless it is jobbing business, perhaps.

The building contractor, above all people, *must sell his experience and past achievements as a basis for obtaining more business* . . . it's all he has to sell, anyway; and this kind of advertising means something very specific and definite. Instead of theoretical examples and fictitious cases, let us consider actual examples of contractors' advertising that has produced profitable results . . . that is, opportunities to obtain contracts. The actual contracts were awarded on the basis of evidence of skill, financial stability, and economy of costs, not on the fact that the contractor advertised.

The contracting firm that does the type of advertising which is illustrated above, specializes in remodeling and modernization of old buildings, though the concern erects new buildings when the opportunity comes its way. Instead of firing grape shot in the hope that something will be brought to the ground, it uses bullets and aims for a specific kill. Realizing that with the advent of Repeal the hotel business would enter upon a new lease of life and recover the business lost to the speakeasies and bootleggers, a campaign was launched to the hotel field. In many large metropolitan centers such as New York, Chicago, Philadelphia, Boston, the revival in hotel business . . . particularly in the dining rooms . . . has been almost phenomenal. Not only has legalized liquor attracted business, but the habit of dining out in leisure and luxury, has definitely revived. Hotel dining rooms and grills are filled to capacity three and four times a night. Bars and cocktail parlors on hotel premises are

crowded. All this means an urgent need for remodeling, expanding, and, in some cases, rebuilding. Acting on this assumption, letter No. 2 above was sent to a small but well selected list of hotel operators in a metropolitan area.

This letter resulted in several responses from hotel men who were contemplating such work as was intimated, and these included three or four invitations to estimate on projects. Here, then, is definite evidence that when the field is carefully selected at the right time, a letter, without any drag, but containing straightforward statements of what the contractor has to offer, will be read, and stands a good chance of interesting the man for whom it is intended and to whom it is addressed.

May I emphasize once more the fact that advertising has done its work when it has created interest to the point that the recipient is ready to talk with the advertiser. Whether these inquiries, and the invitations to submit estimates, resulted in new business, is a matter with which we need not concern ourselves at this time; this is entirely up to the contractor. The fact remains that it was an advertising letter that opened the door . . . a letter that was sent "cold" to a list of possible prospects with whom the advertiser had had no previous dealings.

(Continued to page 66)

## SELLING IN TODAY'S MARKET

THIS IS THE SECOND OF A SERIES of articles on getting business under the changed conditions of today. The author suggests carefully written letters and gives pointers on their preparation and mailing.

# Plea for Home

Facts and figures in February American Builder widely read and quoted. Newspaper articles read by 13 millions. Industry leader describes changed attitude toward home financing.

By J. SOULE WARTERFIELD

President, National Association for Better Housing;  
Member Executive Committee National Association  
Real Estate Boards; Vice-President, Starrett Building  
Company

**D**URING the past 90 days a decided change of attitude toward home building has become apparent in Washington among legislative and administration leaders. Where before there was a decidedly skeptical sentiment regarding the need for more homes or better homes, there is now the feeling that new home building and old home improvements should be promoted and financed enthusiastically as the all-important link in the present recovery chain. As the Washington Review, organ of the U. S. Chamber of Commerce, expressed it in its issue of April 9, "The Administration is definitely intent on devising practical plans for stimulating home construction, including repairs and modernization of existing structures. This is part and parcel of its larger interest in encouraging the revival of the durable and capital goods industries."

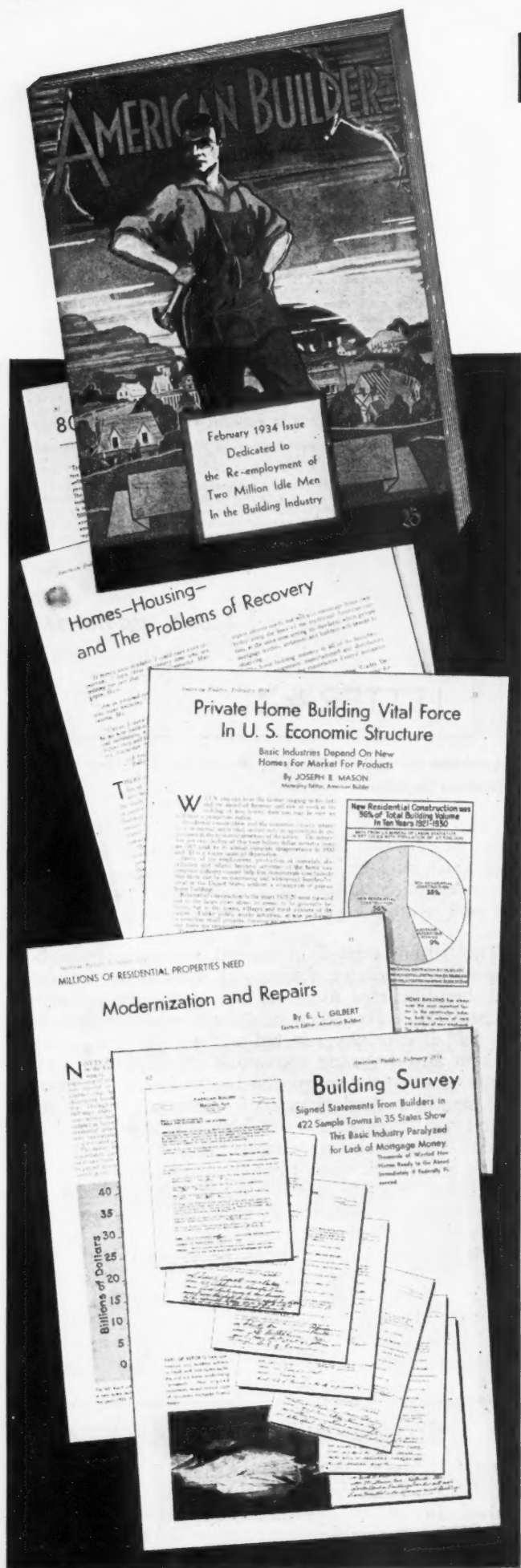
What has brought about this change of attitude? Unquestionably one of the major causes was the united efforts of the building industry, backed by public sentiment, pressing for Federal funds for home building.

The support given this drive by publications serving the small construction industry is most effectively shown by the February (Federal Financing) issue of the AMERICAN BUILDER. This issue, according to a statement on its cover, was "Dedicated to the Re-employment of Two Million Idle Men in the Building Industry," a statement that accurately outlined its objective.

Because of my interest in better housing, I have found most absorbing the story of the presentation of the complete case for the home building industry and its need for financing in the February issue of AMERICAN BUILDER. I believe others interested in better homes will also find it illuminating.

No issue of any building magazine, in my opinion, has ever attracted the attention won by the February AMERICAN BUILDER from congressmen, cabinet officials, governors, newspapers and the men of the building industry themselves. The amazing array of statistics on the need at this time for new home building, the extent of employment which normal home building provides, the vital force home building contributes to the economic structure of this country, and the present lack of financing, were just what was required by the building industry for a fair hearing before Congress and Administration leaders when additional recovery measures were up for consideration.

Because this issue represented the backing not only





# Financing Aid Gets Results

of the contractors and builders, architects, lumber dealers and other building interests, but also of numerous leading manufacturers of building materials and equipment who addressed their messages to Congress in the advertising pages of the publication, it carried special weight. It represented a united home building industry in a plea for a common cause in a fashion that has never before been achieved by this widely disorganized industry.

The important results achieved by the February AMERICAN BUILDER may be briefly summarized:

1. Basic facts concerning the need for homes and the need for financing were assembled in one volume and placed where they could do the most good at exactly the right time.
2. A changed attitude at Washington resulted, leading to favorable legislation already enacted and now pending.
3. Lending and financing interests were put on the defensive with the result that many have announced their intention of again offering funds for home building and repairs.
4. Building industry interests and opinions were welded and unified in one aggressive drive for a common objective.

Because of the remarkable results achieved and the fact that this drive for Federal mortgage money has resulted in a changed attitude toward financing, I am going to tell some of the facts, as I have ascertained them, concerning the fashion in which the AMERICAN BUILDER carried on its campaign for building funds. Although the response to this issue has of course been gratifying to the publishers, it should be a source of even greater satisfaction to the contractors, realtors, architects, and to the building manufacturers who look to these men for their business. I have volunteered to "audit the account," so to speak, of the February issue.

A perfect flood of facts and figures on the need for home building and the need for Federal financing appeared in the newspapers of the country when Congress was considering this legislation. Where did these newspapers get this information? A large part was provided by the AMERICAN BUILDER. Leading editorials and articles from this publication were preprinted in shortened form and sent out during December and January to 1400 newspapers.

The amazing fact is disclosed that 580 newspapers with a circulation totaling more than 13,000,000 published articles on these subjects sent them by the AMERICAN BUILDER. Actual clippings in the office of the publisher show this tremendous circulation. The millions who read these facts and figures concerning home building in different forms and in different publications as they were re-used and re-circulated cannot be estimated, but are many times that number.

The printing and reprinting of the facts from this issue in newspapers, magazines and trade publications created a great wave of public interest in home financing. Those custodians of private funds for building, the building and loan associations, were influenced by this public sentiment for Federal home building credits and accepted the challenge to their lending institutions which in normal times supply much of the home mortgage money. The "American Building Association News" for March, official organ of the United States Building and Loan League representing 80 per cent of all the building and loan associations, urged its readers, in a two-page editorial, to lend money now for new building and for modernizing and repairs, pointing out that increased building activity will in-

THE FLOOD OF LETTERS, telegrams, and newspaper clippings which followed publication of the February Re-employment and Financing Number of the American Builder amply demonstrated the keen interest in this subject. The Editor is shown at his desk laden with letters, newspapers and clippings. Articles carrying facts and figures from the February issue were published in newspapers with a total circulation in excess of 13,000,000.





crease the value of foreclosed properties held by these lending institutions. This editorial concluded with these vigorous words, "Lend some money, if you can get it, for new building and capitalize on the increased activity as an interest arouser for the properties now on your books—but by all means lend all the money you can for new building, modernization, repairs."

"Building and Loan needs a good spring tonic, and the February issue of the AMERICAN BUILDER is a powerful one."

Carefully laid plans were followed to get the true picture of home building and the need for home financing to the attention of Administration leaders at Washington. It was felt that no matter how important the material presented nor how clearly the facts were shown, they would be valueless unless placed in the right hands. A careful list was made up, therefore, and 5,000 additional copies, each with a specially written letter, were sent out. The issue was thus placed in the hands of every senator, congressman, the members of the President's Cabinet and the President himself. Administrative and executive assistants of the Federal Government all received copies, and this included such key men as the directors of the Home Loan Banks, the R. F. C., the Public Works Administration, the NRA, the Federal Reserve Board, the National Emergency Council, and the Departments of Commerce and Labor housing officials.

In addition to blanketing Washington, copies of the February issue were sent to the governors of all states, to labor leaders and building industry organization officials, to the mayors of leading cities, to chambers of commerce, to heads of building departments, to 100 national magazines, and to real estate and building editors of 1400 newspapers. Each copy was accompanied by a specially written letter directed to the individual and pointing out his interest in this matter.

Did this issue and this procedure accomplish its purpose? As this article is written, letters of appreciation and expressions of interest are still coming in to the offices of the AMERICAN BUILDER. Already several hundred have been recorded. Significantly, the greatest number received was from the congressmen, officers of the Federal Administration and public officials to whom the issue was specially addressed. To date, 54 letters have been received from senators, representatives and Administration heads concerned with

housing. Governors of 7 states wrote, and mayors of many cities. Presidents and vice presidents of some 40 manufacturers of building materials and equipment expressed their gratification in the issue. Chambers of commerce in 32 cities wrote; and letters were received from numerous building trade groups, trade associations and building organizations. Response from regular readers of the AMERICAN BUILDER—contractors, builders, lumber dealers, architects, realtors and other active men of the building industry—was tremendous. Practically every state in the Union was represented, and most of the leading cities. This gratifying response showed what a strong interest the public has in better homes, and that this campaign was a potent force for securing the needed financial assistance from the Government which now appears to be forthcoming.

### Got Immediate Results

The way in which this issue was accepted by men in high places and put to immediate use in behalf of the home building industry is a strong testimonial to the worth of the facts it contained. John H. Fahey, chairman of the Federal Home Loan Bank Board, immediately wrote requesting three additional copies for members of the Board, saying, "The tabulations and charts provided in this issue are most suggestive and interesting. I am particularly interested in those which reflect housing needs and the unemployment that has developed because of the cessation of home building." Later he wired for 25 additional copies. Winfield W. Riefler, Administration Economist, writing for Frank C. Walker, director of the National Emergency Council, after examining copies of this issue, wrote, "I am extremely interested in this problem and welcome the opportunity to go through the material you have assembled in detail." It is highly significant that these two men have been prime movers in the preparation of the Administration's plan for a great national program of home modernizing and rebuilding with Federal financial backing.

Another and extremely important service played by the February issue was its use in the Congressional hearings on the Steagall HOLC bond guarantee bill and by members of the finance committee of the House. In this connection, the Building Survey among AMERICAN BUILDER readers was valuable. The signed questionnaires of 689 builders who wrote the AMERICAN BUILDER stating the need for financing in their towns and telling how many houses they could build if financing were made available were bound in a leather volume and delivered to Chairman Fahey of the Home Loan Bank Board by the editor of the AMERICAN BUILDER. Here was actual testimony from the field—from men who knew the facts in their local communities about the lack of financing and the need for homes. This bound volume of builder statements was offered in evidence at the Congressional hearings on the Steagall Bill and influenced the studies of the Administration advisors and congressmen actively supporting a program of Federal encouragement for home construction.

Thousands of reprints of articles and advertisements that appeared in the February issue were sent out by trade associations, manufacturers, building organizations and others interested in a restoration of normal building activity. The follow-up article, "Home Building or CWA Mobs?" by Dan Moley, president of the Cleveland Federation of Labor, which was published in the March issue of the AMERICAN BUILDER, was also sent to every member of Congress, to 1400 newspapers, to all building unions and trade organizations.

## MORE THAN 13 MILLION

### Circulation of Newspapers Which Carried Facts and Figures on Financing Need As Supplied by American Builder.

Item	No. of Papers	Circulation
November Editorial "Federal Loans".....	3	47,000
December Editorial, "Home Loans for the Forgotten Man".....	14	1,414,000
January Editorial, "Federal Home Loans and Recovery" .....	233	4,786,000
February Editorial, "Homes, Housing and the Problems of Recovery".....	44	1,850,000
February Article on Home Need.....	207	600,000
February Article on Modernizing Need.....	18	1,253,000
February Miscellaneous Articles and Items.....	71	3,000,000



## Exterior Details Of Better Homes

ON THIS PAGE are two exterior details that are widely separated, both geographically and architecturally. The house above is a charming Cape Cod Colonial designed and built by C. C. Merritt, located in New York State. The details of doors, windows and exterior shingles are carefully and artistically handled. THE HOUSE ON THE RIGHT is located in the River Oaks subdivision of Houston, Tex., and was designed by H. A. Salisbury, architect. The double repetition of the roof angles creates a decidedly modern and attractive appearance.

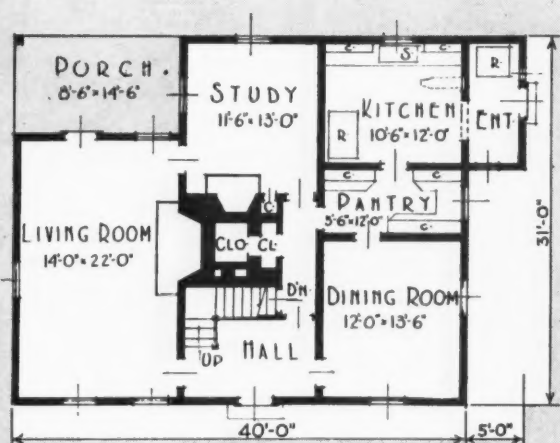




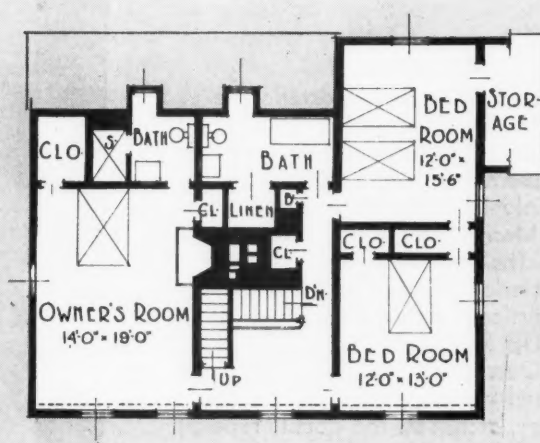


## Massachusetts Colonial

HONORABLE MENTION IN THE RECENT Better Homes in America Architectural Competition was given this reproduction of a charming old Massachusetts Colonial type house. The architect is Royal Barry Wills of Boston. Exterior is of clap-board stained gray. Door is studded plank painted red. Roof is of second-hand slate. Cost Key is 2.203-154-1177-49-26-22.



• FIRST FLOOR PLAN •



• SECOND FLOOR PLAN •



## Pleasant Interiors

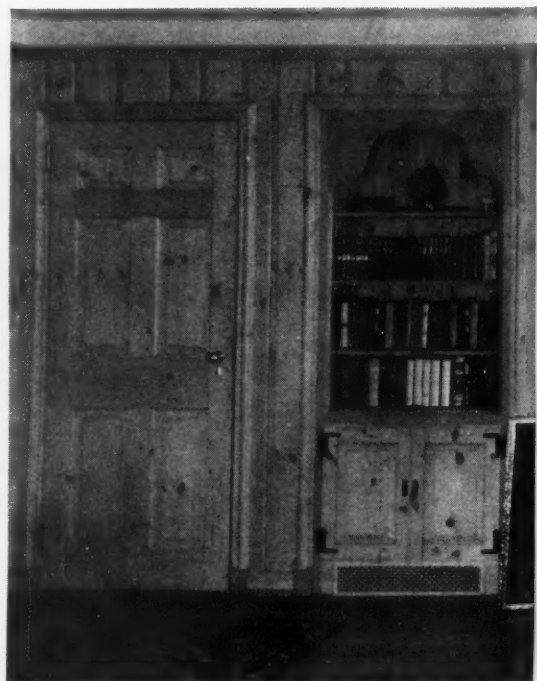
OLD PINE BOARDING IS USED in the study and hall shown below to produce an unusually attractive home. The fireplace is handled with great skill, which results in a simple, friendly hearth. The interior is simple, informal, friendly in tone. House of Warren Ordway, Newton, Mass. Designed by Royal Barry Wills.

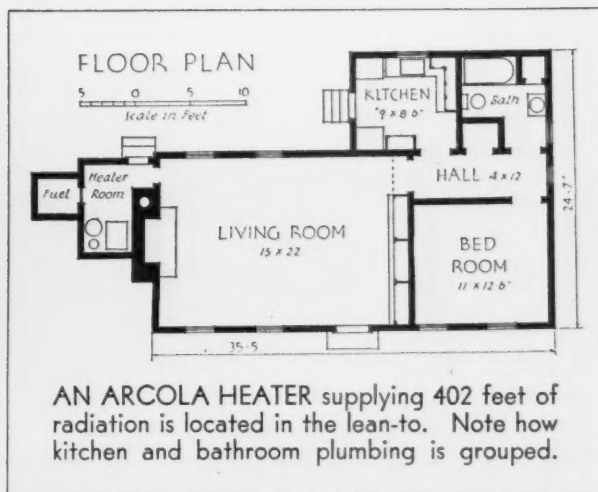




## A Prize Home of Whitewashed Brick

WILMAR REALTY CORP. of Long Island, N. Y., built this attractive brick house and were awarded an honorable mention in the recent Better Homes in America Small House Competition. The architect was Reinhard M. Bischoff. It is substantially built with cinder block walls faced with common brick which have been whitewashed. Shutters are painted dark green. Floor plan is of typical Colonial type.





## Low Cost Compact

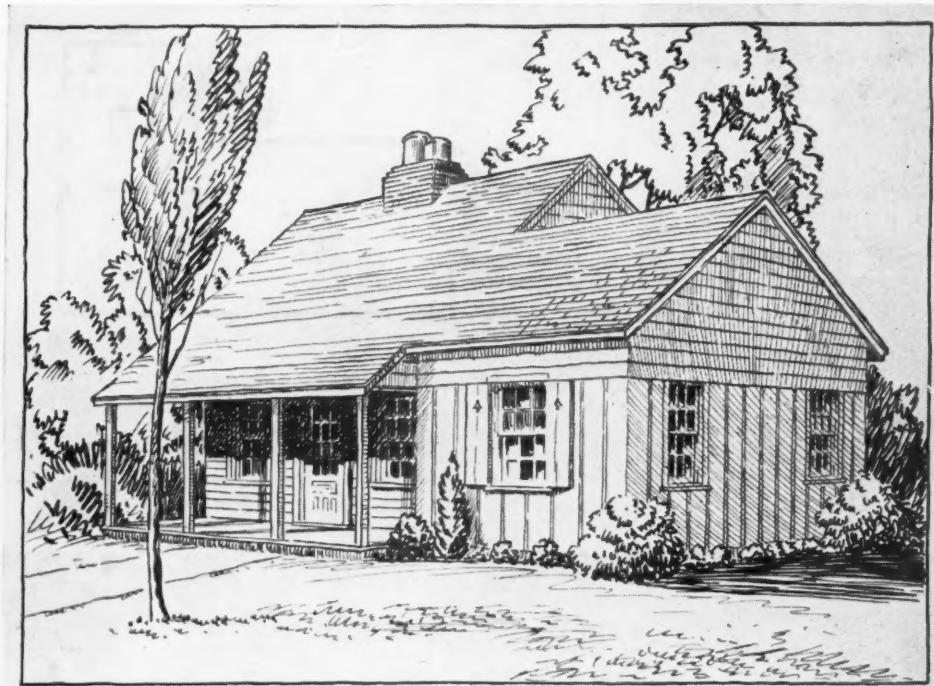
THE HOUSE AT RIGHT is a small cottage built in Virginia last year at a cost of \$1742 and awarded Honorable Mention by Better Homes in America. The architect was Milton L. Grigg. Exterior is of random width pine ship-lap painted oyster shell gray with white trim and green shutters. The built-in cupboard shown above, made of random width wide pine, is especially attractive and easy to build.



AN UNUSUAL but livable arrangement is the feature of the small home shown above which was built at extremely low cost. Roof is of composition shingle. Living room walls are of random width pine set vertically. Rafter are exposed, floors of random width pine. There is no basement. Heater in lean-to is supplied by flue in fireplace chimney. Cost Key is .947-140-(774)-(34)-14-11.

A LIVING ROOM WALL of unusual charm is shown at left, designed by R. M. Bischoff. The knotty pine paneling, attractive doors, well designed bookcases and fireplace mantel are splendidly done. The house also has asbestos shingles, copper leaders and hood over the entrance, paneled basement playroom.



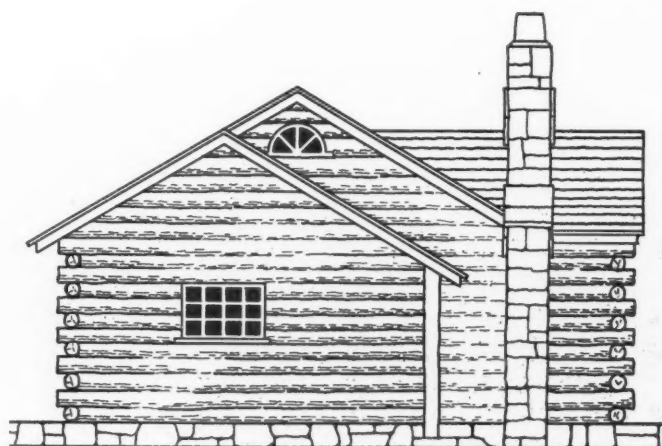
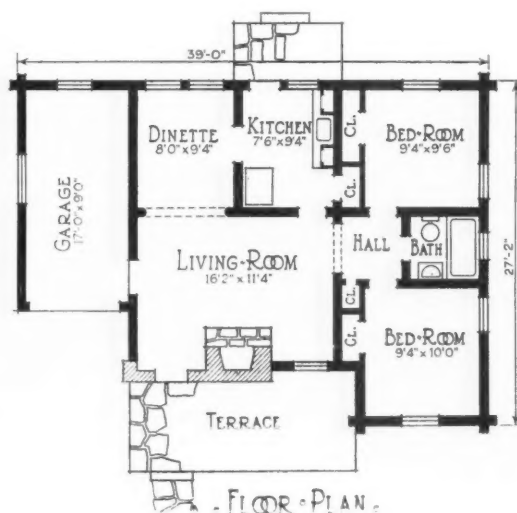


## Subsistence Home Plans

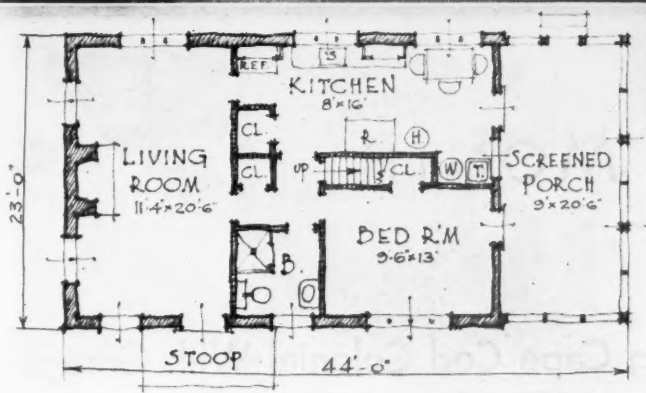
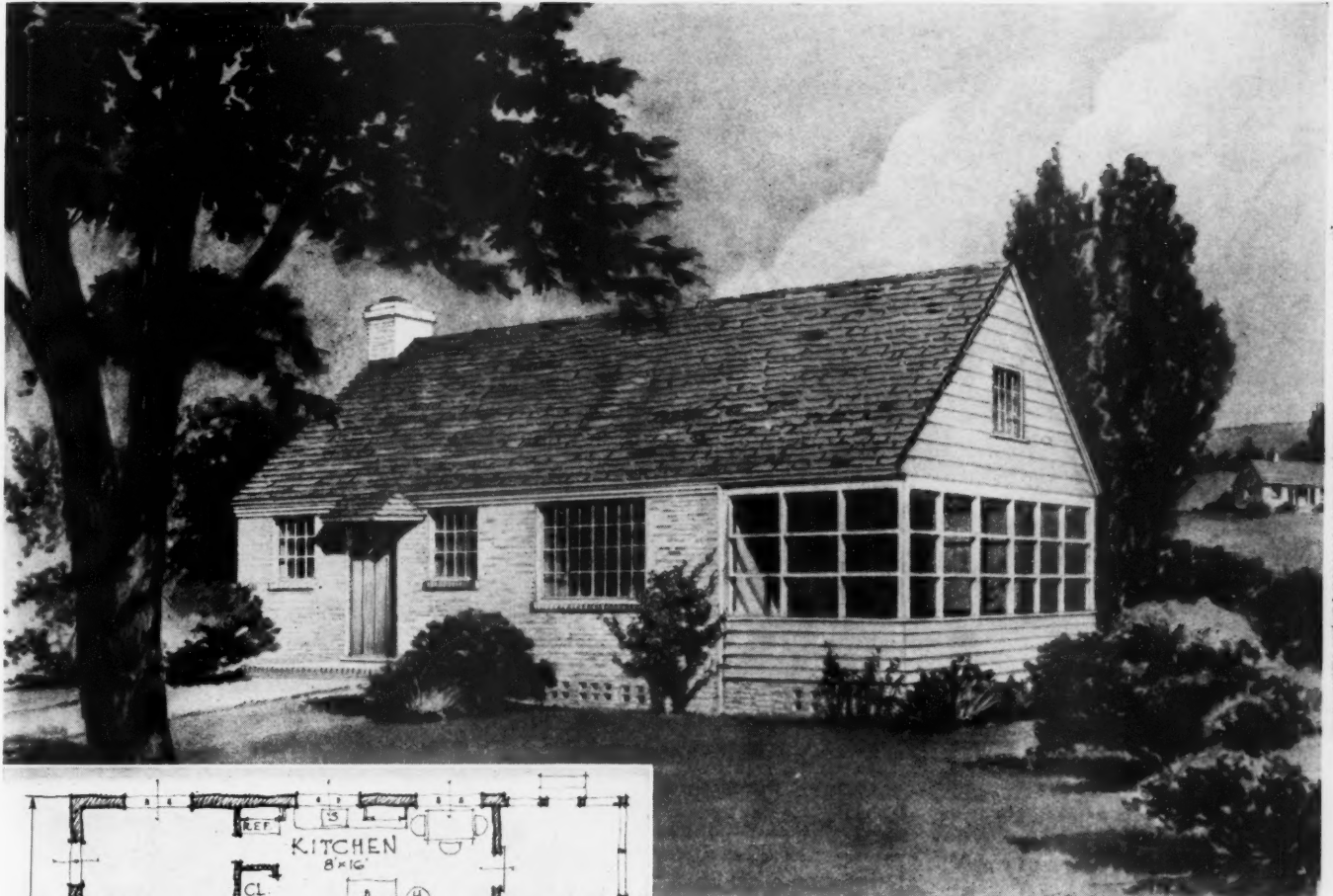
PLANS FOR THIS low cost house have been prepared by the Division of Subsistence Homesteads of the U. S. Department of the Interior. This is plan No. 3-35 which is compact, livable, and yet inexpensive. Provision for the addition of two extra future bedrooms and bath are made. Cost Key is .853-110-(620)-(27)-13-11.

## Attractive Rustic Cabin

SHOWN BELOW IS AN UNUSUALLY FINE log cabin of especial interest this spring, which was designed by Carl H. Weckers, architect, of Mountain View, N. J. Contrary to the usual log cabins which "just grow," this one is carefully planned for comfortable living and can be used the year around if necessary. The kitchen dinette arrangement opening off the living room is good.

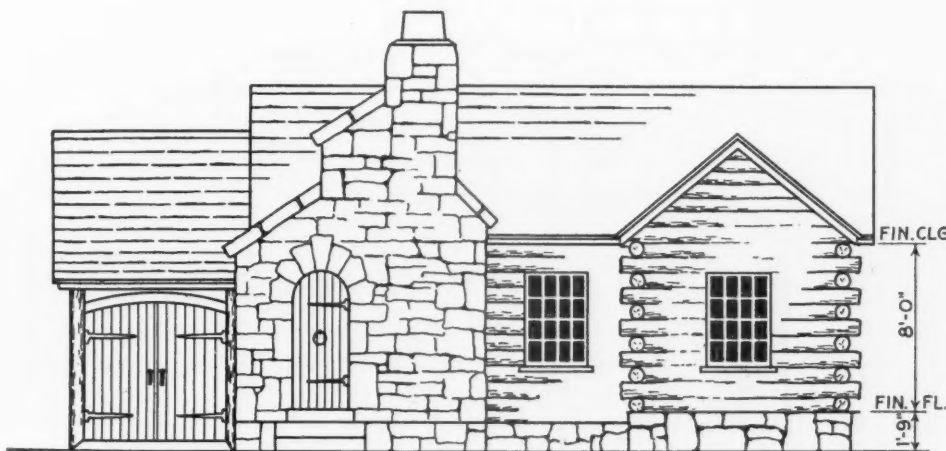


• SIDE • ELEVATION •



## Tennessee Valley Home

THIS U. S. PLANNED HOUSE is simple, livable, attractive. The big kitchen opens onto a screened porch for eating. Walls are of brick stained white. Rooms are of good size, with plenty of windows.



◦ FRONT ◦ ELEVATION ◦

THIS CABIN is suitable for summer or all year around living. The entrance detail using natural stone is especially good, and such an entrance would harmonize well with the log siding or natural log construction. Garage doors are faced with log siding to carry out the rustic plan. Cost Key is 1.074-132-(862)-(37)-13-13.





## THE HOUSE OF THE MONTH

### Pleasing Cape Cod Colonial With Garage

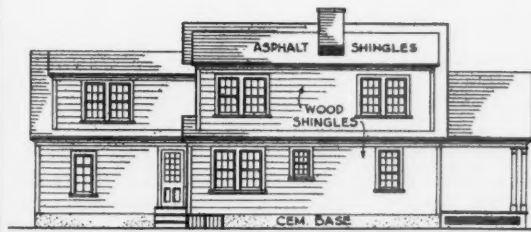
Designed and built by Robert E. Jackson, Wakefield, Mass.

Cost Key is 2.212-150-892-39-23-21

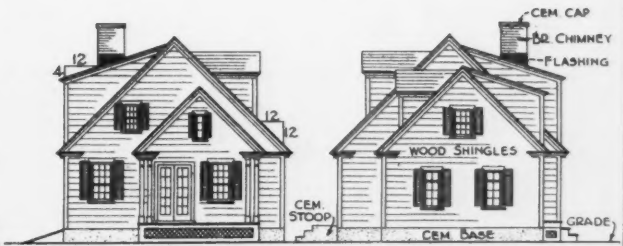
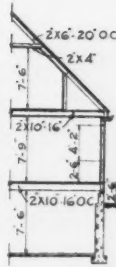
**A MEDIUM PRICED HOUSE** with many features to recommend it for buyers in today's market. Carefully drawn details with correct scale are given opposite.

THE CAPE COD HOUSE OF THIS TYPE is one that is popular not only in New England, where this house is located, but in practically every part of the United States. As planned, this house calls for the use of shingle exterior. An interesting variation is the use of a common brick veneer in front, whitewashed.

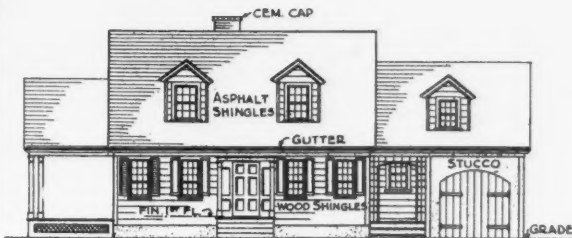
FEATURES INCLUDE large living room and fireplace, large open porch, three bedrooms, large tiled bathroom with shower, ample closets throughout. The kitchen arrangement as planned by Mr. Jackson will bear further study to secure a more suitable arrangement for other localities.



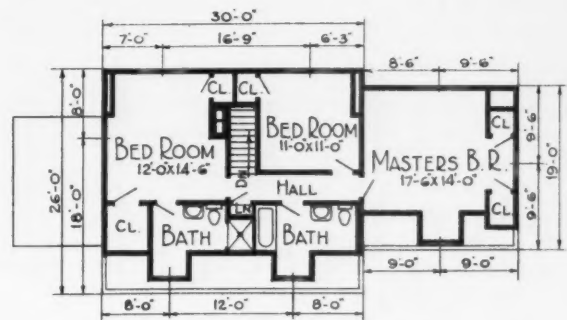
• EAST • ELEVATION •



• NORTH • ELEVATION • • SOUTH • ELEVATION •



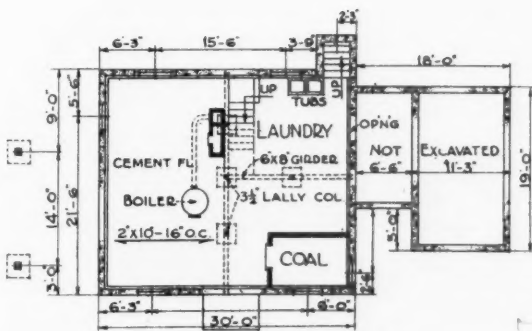
• WEST • ELEVATION •



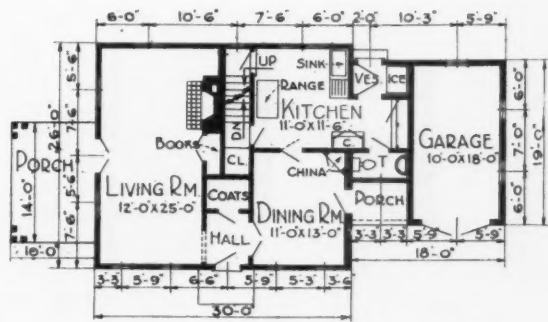
• SECOND FLOOR PLAN •

5 10 15 20 25 30

• SCALE IN FEET •



• BASEMENT FLOOR PLAN •



• FIRST FLOOR PLAN •

DETAILED DRAWINGS OF A HOUSE DESIGNED AND BUILT at Wakefield, Mass., by Robert E. Jackson, builder and realtor. An open porch connects garage and entrance.



# AN OLD TIMER TELLS HOW TO BE A BETTER BUILDER

By GEO. M. BLISS

President, Geo. M. Bliss Construction Co.  
Kansas City, Mo.

**T**HIS article is not directed as a lecture to the contractor who is using No. 2 lumber when No. 1 is specified, or inferior material when the best is called for, or who is chiseling (he will not long endure, for murder will out), but rather to the man who desires to increase his knowledge, improve his methods, and please his customers.

Bruce Barton once said, "The success a man achieves before he is thirty comes as a result of home training and education his parents gave him. That the progress he makes after thirty comes as a result of what he does for himself." This is absolutely true. If you want to get ahead, you must study, and study is a never ending process.

William L. Fletcher in his book, "How To Get The Job You Want," gives us this pertinent idea, "The man who is not reading from three to five trade papers published in his line of business and at least one business book a month stands a very small chance of advancement." Now, stop and check up on yourself. In competition for a job the man who reads his trade papers and the worth-while business books is almost sure to win out over the man who does not.

I remember a story my father told about when he was crossing the plains with the covered wagons, they found after an Indian raid one of the men with a wounded leg. After several days it was decided that the man's leg would have to be amputated and father was chosen to do the job. They took the cook's big butcher knife and sterilized it by holding it in the camp fire and with the help of a wood saw, he did the job. Times have changed and you wouldn't pick a doctor to amputate your leg with instruments like those. Now your clients do not want you to make repairs or build buildings unless you have the latest tools and knowledge.

## How to Build A Library

Get the habit of calling on big financial men, big prospects. Don't always look for prospects who want to build 10 x 18 garages or that is all you will be building. If you lack the guts to call on the giants of industry, you will never be a giant yourself. However, knowledge gives confidence. If you can't talk in public or get nervous, join a public speaking class. There are several going on in your city right now, and you would be surprised if you knew who some of the members were. They are getting ahead.

Write to the Arrow Book Company, 167 Madison Ave., New York City, and ask for their Building Age Book Guide—a 47-page catalog. Look over their list of books; start a shelf of construction books. I suggest these four as a start:

The Building Estimator's Reference Book (Estimating), Frank R. Walker, Chicago, Ill. Price \$10.00  
Appraising the Home, by Horace F. Clark (Appraisals), Prentice Hall, Inc., New York City Price \$6.00  
Real Estate Principles and Practices (Real Estate), by Nelson L. North, Jr., Prentice Hall, Inc., New York City, Price \$5.00  
Architects and Builders Handbook (Engineering), by Kidder &

Noland, Inquire Arrow Book Co., 167 Madison, New York City Price \$8.00

Other good publishers of building texts are McGraw Hill Publishing Co., John Wiley & Sons, Scientific Book Corp., and the American Builder Book Dept.—all of New York.

Here is a list of some of the magazines. Subscribe to at least two of these:

American Builder .....	\$2.00
American Home .....	1.00
Architectural Digest .....	7.50
Architectural Forum .....	7.00
Architecture Record .....	3.00
Architecture .....	3.00
Better Homes and Gardens .....	.60
Construction Methods .....	2.00
Engineering News Record .....	5.00
House and Garden .....	3.00
Home and Field .....	3.00
Pencil Points .....	3.00
The Journal of the American Institute of Real Estate Appraisers .....	5.00

Write to the Superintendent of Documents, Washington, D. C. Ask him to send you, "Care and Repair of the House"—"Building and Housing," publication BH15—Send 20c. This is a very interesting 121 page Bulletin. Pages 104 to 112 give a list of government publications of interest to builders. Also a list of many other booklets which you should read. A few government booklets I suggest you get:

How to Judge a House .....	\$0.10
How to Improve the Hot-Air Furnace .....	.05
Convenient Kitchens .....	.05
Making Cellars Dry .....	.05
House Insulation, Its Economies and Application .....	.10
Circular of the Bureau of Standards, No. 69 Paint & Varnish .....	.15
Light Frame House Construction Trade and Industrial Series No. 41, Bulletin No. 145 .....	.40
Stucco Investigations at the Bureau of Standards, Circular of the Bureau of Standards No. 311 .....	.15
Construction of Chimneys and Fireplaces—Farmers' Bulletin No. 1649 .....	.05

Arrange with your local F. W. Dodge Corporation to secure a set of Sweet's Catalog File and study these books.

If you do not have a large office with equipment, purchase a metal file, legal size, four drawers high. Use part of it for correspondence, part for bids and receipts, and use one drawer to file bulletins, circulars and advertising literature.

On each construction job, have a newly painted sign with your name, address and telephone number. Advertise yourself.

Train your workmen when repairing properties which are occupied to be courteous to the tenants and not to leave the place until they have cleaned it up.

Clip out of newspapers and magazines all advertisements of contractors and builders and keep in a file. You may desire to write an advertisement for yourself and these clippings will be of great assistance.

# MODERNIZATION

*"which makes buildings of all kinds more cheerful, more livable and more salable"*



BEFORE

THIS little house at Greensboro, North Carolina, was selected for a demonstration job in a Community Modernizing Campaign. Note the striking change effected by the use of brick veneer, new roof, gutters, a garage and other simple repairs and modernization! Structural changes included changing interior plan, installation of a new and modern bathroom, re-plastering and new hardwood floors, as well as the excavation of basement and installation of a new heating plant.

Before modernizing the property was valued at \$2,000; the present value is estimated conservatively at \$5,000. Total cost of modernizing was \$2,250, so the net gain by modernizing was \$750.



AFTER

# 65 Per Cent Need Repairs!

## First Reports from Government Survey of Dwellings Show Critical Upkeep Conditions with Few Vacancies and Much Overcrowding

CONSIDERABLE activity in home building and home repairs will be required at Casper, Wyo., Columbia, S. C., and Butte, Mont., before these widely separated cities will present a normal housing condition, according to the first three city reports of the Real Property Inventory released respectively on Apr. 10, 17 and 25 by Washington officials. A door-to-door canvass of all residential structures in these three cities by CWA investigators showed 65 per cent of the houses in need of repairs—a total of 14,041 out of 21,628—and 790 listed as “unfit for human habitation,” amounting to over 3 per cent of the total.

These three cities are the first to be reported of more than 60 cities, representing every state, which have been canvassed in this study by door-to-door enumerators working under the direction of the Bureau of Foreign and Domestic Commerce and the Bureau of the Census, using funds allotted by the Civil Works Administration. Detailed statistics have been collected concerning the physical condition of approximately 2,500,000 homes which, when classified and released, will be of great value to the building industry as well as to Congress and Administration officials concerned with home financing, home building and home repairs.

This is the first time that authentic, comprehensive figures have been available on existing residences giving their state of repair, occupancy, type of construction and extent of plumbing, heating and other home equipment. Indicating the Administration's growing determination to do something for home building, the following paragraph in the Department of Commerce release of Apr. 25 concerning Butte, Mont., is perhaps significant. “The primary purpose of the Real Property Inventory is the revival and progressive stimulation of the nation's building industry through the collection and dissemination of hitherto unavailable data on housing conditions, with particular reference to obsolescence, disrepair, vacancies and rentals. The facts are expected to prove of great value in gauging sales campaigns for repairing, renovizing, rebuilding, modernizing and new building.”

The summaries which follow for Casper, Columbia and Butte will be followed next month by the other cities covered in this Real Property Inventory so far as they are released.

### Casper, Wyo.

Out of about 4,270 structures surveyed in Casper, 2,783, or 65 per cent, were found to be in need of repairs of some kind, while 262, or 6 per cent, were listed as “unfit for human habitation.” Of the 5600 residential units contained in the structures surveyed, 675 were unoccupied, giving Casper a vacancy of 12 per cent. But after making allowances for those unfit for use it was estimated that there were about 400 unoccupied units which were habitable, thus reducing the vacancy ratio to 7 per cent.

Over 75 per cent of the residential buildings in the city were constructed between 1915 and 1925. The extent to which the depression has curtailed building

was demonstrated by the fact that only 48 houses have been erected since the end of 1929. Wood was shown to be the predominant material of construction, with over 82 per cent of the residential buildings being of frame construction. An interesting sidelight on the type of building was revealed by the fact that almost half of the homes were without basements.

About one-third of Casper's dwelling units were owned by their occupants, and 60 per cent of these had no mortgages or other liens on them. Less than 2 per cent of Casper's living quarters were classified as overcrowded or greatly over-crowded, while about 80 per cent were considered to be adequate or more than adequate. Sixty-one families were found to have “doubled up.”

The Inventory disclosed that 12 per cent of the residential units were without running water—hot or cold—while 1410 units had no private indoor water closets and 1721 had no tubs or showers, over 25 and 30 per cent, respectively. Over half of the residences were heated by gas, and only 31 dwellings were discovered to have no heating apparatus.

### Columbia, S. C.

Of approximately 10,000 structures surveyed in Columbia, 6,490, or 65 per cent, were found to be in need of repairs of some kind, while 170, or 1.7 per cent, were listed as “unfit for human habitation.” In rating the condition of structures, the standards of the particular locality are considered.

Of the 12,188 residential units contained in the 10,000 structures surveyed, 631 were found to be vacant, giving Columbia a vacancy ratio of 5.2 per cent. Making allowance for the “unfit,” this ratio is reduced to 3.7 per cent. The survey shows that 823 families have “doubled up” during the depression, enough to fill 7 per cent of the existing family units or double the number found vacant.

A rating of “crowded” was given 2,948 dwellings in Columbia, 493 overcrowded and 128 as greatly overcrowded, while 69 per cent of the dwellings had adequate or more than adequate space for the occupants.

Residences without heating facilities were 25 in number. The use of open fireplaces with wood or coal for fuel is indicated in the figures of 5,458 residential units using heating apparatus other than furnace or stove.

### Butte, Mont.

Of approximately 7358 structures surveyed in Butte, 4768, or 64 per cent, were found to be in need of repairs of some degree, while 358, or 5 per cent, were listed as “unfit for human habitation.” Of the 10,727 residential units contained in the 7358 structures, 1680 were vacant, giving Butte a vacancy ratio of 15 per cent. Making allowance for the “unfit” this ratio is reduced to 12 per cent. As the survey disclosed that 498 families have doubled up during the depression, and 1555 units are reported as “crowded” it may be concluded that with such a ratio of vacancy upon a return to normal economy the city would find itself in need of new building.



## REAL PROPERTY INVENTORY DATA (3 CITIES)

TYPE OF DWELLING				MONTHLY RENTAL			
Type	Number of Structures			Number of Dwelling Units			
	Columbia	Casper	Butte	Columbia	Casper	Butte	
Single Family .....	8372	3660	5925	Number Rental Units (includes vacant units for rent) .....			
2 Family .....	1120	255	725	Under \$10.00 .....	8611	2542	6629
3 Family .....	20	8	53	\$10.00 to \$14.99 .....	3872	655	1075
4 Family .....	78	50	229	\$15.00 to \$19.99 .....	1550	688	1728
Row House .....	30	54	52	\$20.00 to \$29.99 .....	780	349	1238
Apartment .....	32	60	156	\$30.00 to \$49.99 .....	1183	774	1329
Other Dwelling .....	357	140	218	\$50.00 to \$74.99 .....	989	502	761
				\$75.00 and Over .....	214	45	142
					23	4	14
AGE OF STRUCTURES				NUMBER OF ROOMS			
Number of Years	Number of Structures			Rooms	Number of Dwelling Units		
	Columbia	Casper	Butte		Columbia	Casper	Butte
0-4 years .....	646	48	66	1 .....	678	300	618
5-9 years .....	1234	531	116	2 .....	1182	987	1357
10-14 years .....	1322	1772	309	3 .....	3103	1347	2443
15-19 years .....	972	1450	1264	4 .....	2029	1332	2801
20-24 years .....	1240	241	836	5 .....	1666	895	1686
25-29 years .....	726	106	822	6 .....	2038	370	938
30-34 years .....	2091	56	1490	7 .....	874	143	403
35-39 years .....	321	41	902	8 .....	605	111	219
40-49 years .....	810	19	1239	9 and over .....	625	108	216
50-74 years .....	449		255				
75 years and over .....	106		15				
CONDITION				DURATION OF VACANCY			
Condition of Structure	Number of Structures			Number of Dwelling Units			
	Columbia	Casper	Butte		Columbia	Casper	Butte
Good .....	3261	1220	2215	Number Vacant .....	631	675	1680
Needs Minor Repairs .....	4595	1939	3023	Time .....			
Needs Structural Repairs .....	1895	844	1745	0-5 months .....	289	324	436
Unfit for use .....	170	262	358	6-11 months .....	126	100	229
				1 year .....	38	49	319
				2 years and over .....	23	189	666
				Not reported .....	155		
MATERIALS OF CONSTRUCTION				TYPE OF HEATING APPARATUS			
Materials	Number of Structures			Number of Dwelling Units			
	Columbia	Casper	Butte		Columbia	Casper	Butte
Wood .....	8269	3492	4921	Hot Air Furnace .....	1130	1110	1242
Brick .....	1442	320	2287	Steam or Vapor .....	369	525	822
Stone .....	16	2	10	Hot Water .....	610	362	834
Concrete .....	29	52	72	Heating Stove .....	4502	3584	7563
Stucco .....	144	339	46	Other .....	5458		232
Other .....	39	50	10	None .....	28	31	13
GARAGE				FUEL USED			
	Columbia	Casper	Butte	Number of Dwelling Units			
Number of structures with garage .....	4290	2795	4073		Columbia	Casper	Butte
Number of structures without garages .....	5611	1872	3231	Coal .....	8036	2470	7290
Car Capacity of Garages .....	5878	3695	5296	Wood .....	3801	32	180
Number of Autos .....	5100	3337	4286	Gas .....	10	2955	2969
				Oil .....	81	12	24
				Other .....	76	100	230
DATA CONCERNING DWELLING UNITS				RUNNING WATER			
	Columbia	Casper	Butte	Number of Dwelling Units			
Total White Families .....	7121	4826	8938		Columbia	Casper	Butte
Total Families of other races .....	4403	91	67	Cold only .....	4904	836	2056
Number of extra families (two or more families living together) .....	823	124	498	Hot and cold .....	4405	4072	8120
Total Number of dwelling units .....	12188	5619	10727	None .....	2805	699	526
Number Occupied .....	11557	4920	9025				
DURATION OF OCCUPANCY				LIGHTING			
Time	Number of Dwelling Units			Number of Dwelling Units			
	Columbia	Casper	Butte		Columbia	Casper	Butte
0-5 months .....	2669	1354	1623	Gas .....	2	2	4
6-11 months .....	1513	588	673	Electricity .....	7882	5108	10540
1 year .....	1339	584	852	Neither .....	4102	477	126
2 years .....	862	365	657				
3-4 years .....	1360	560	1034				
5-9 years .....	1567	625	1409				
10-19 years .....	1456	793	1656				
20 years and over .....	742	52	1074				
EXTENT OF CROWDING				COOKING			
	Number of Dwelling Units			Number of Dwelling Units			
	Columbia	Casper	Butte		Columbia	Casper	Butte
Very Spacious .....	2388	1144	2341	Gas .....	4788	4883	3174
Spacious .....	2610	1224	2309	Electricity .....	24	31	1098
Adequate .....	2947	1540	2715	Neither .....	7168	673	6394
Crowded .....	2948	927	1555				
Overcrowded .....	493	69	83				
Greatly Overcrowded .....	128	15	13				
ESTIMATED PROPERTY VALUE				PRIVATE INDOOR WATER CLOSETS			
	Number of Dwelling Units			Number of Dwelling Units			
	Columbia	Casper	Butte		Columbia	Casper	Butte
Number Occupied by Owner .....	3577	1865	4084	None .....	4444	1410	2409
Owned free .....	1214	1115	2772	1 .....	6602	3876	8052
Mortgaged .....	1372	743	612	2 .....	691	275	187
Not reported .....	991			3 .....	205	13	20
Under \$1,000 .....	278	466	727	4 and over .....	67		7
\$1,000 to \$1,499 .....	217	217	568	5 and over .....			5
\$1,500 to \$1,999 .....	197	186	517				
\$2,000 to \$2,999 .....	295	294	654				
\$3,000 to \$4,999 .....	704	486	619				
\$5,000 to \$7,499 .....	618	168	270				
\$7,500 to \$9,999 .....	187	26	51				
\$10,000 to \$14,999 .....	198	16	42				
\$15,000 to \$19,999 .....	71	5	9				
\$20,000 and over .....	59		9				
TUBS AND/OR SHOWERS				MISCELLANEOUS			
	Number of Dwelling Units			Number of Dwelling Units			
	Columbia	Casper	Butte		Columbia	Casper	Butte
None .....	5252	1721	3418	Mechanical Refrigeration .....	1895	813	991
1 .....	6041	3695	7111	Vegetable Garden in 1933 .....	1316	850	1177
2 .....	584	158	123				
3 and over .....	126		25				

# What Is MODERNIZATION?

By E. L. GILBERT

**W**HEN modernization is mentioned to the layman, and to some building professionals, it all too often creates thoughts of changes in appearance only. However, all modernization jobs will be found to consist primarily of four major problems, of which appearance is but one factor.

Some jobs consist largely, it is true, of methods and means to be used to change appearance. Other projects must be studied with a view to affording greater convenience and utility for the occupants of the property. In still other cases the first consideration is to extend the term of useful service of the structure a number of years; this type of job involves, frequently, both major and minor repairs. The fourth major problem concerns the creation of new concepts of living, such as the provision of conditioned air, scientific lighting, etc., which were not previously familiar conditions in the structure. A thorough modernization

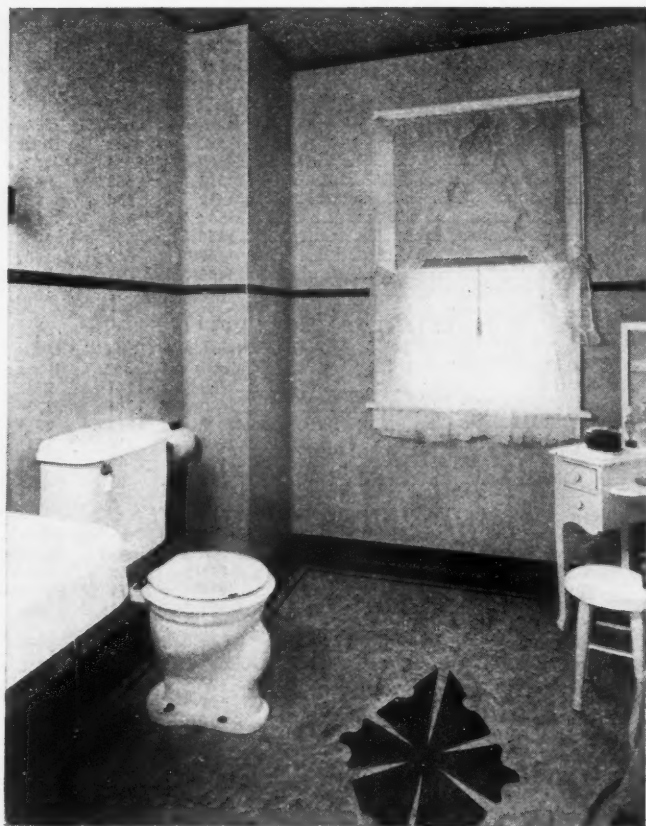
job may be concluded by solving only one of these four major problems; but usually two or more of the problems must be considered in order to provide lasting satisfaction to the property owner.

For these reasons it will be wise for today's contractor or builder, when studying prospective modernization jobs, to make notes from four different viewpoints: first, to improve appearance—second, with the thought of providing greater convenience and utility—third, to include all necessary repairs and—fourth, to bring the entire property thoroughly up to date through the provision of new pieces of equipment, or changes in present equipment, so that the owner or occupant may have every satisfaction from the old building that could otherwise be obtained only by the purchase of a new structure.

Since the solution of all four major problems of modernization depends to a great extent upon the various materials, a knowledge of the latest findings regarding new materials, equipment and specialties is of unusual value in modernizing work. Modern methods and thinking with regard to the new ways of using some products is equally important. If we ex-



Linoleum has become widely popular as a wall covering material in addition to its well known usefulness underfoot. Photo above shows old bathroom and, at right, same room after modernization with linoleum.



amine each new modernization job which occurs, from the four viewpoints previously described, and have an up to date knowledge of materials and methods and ideas, a greater volume of business will result. This article, though not claiming to be all-inclusive, presents a few of the ideas which other contractors and builders have found most valuable in modernizing work.

### PROBLEM I: Appearance

Real estate of all kinds depends for value upon its acceptance by the general public; the greater the popularity or acceptance of a given piece of property by the general public, the easier it is to sell or rent that property. In buildings this is even more true than in the case of vacant land; a run-down property attracts neither purchasers nor tenants, except at a heavy loss on the part of the owner.

Disregarding location, which must be most carefully studied during the planning stage, not after the structure is erected, popular acceptance is most often based on appearance alone. Neither homeseeker nor business man will consider, unless reduced to the lowest financial estate, a shoddy residence or run-down business headquarters. By changing a poor appearance to good, which is part of the modernization idea, buildings can be transformed from losing propositions to money makers. How can this be done?

Does the building look shabby? Perhaps a good paint job would change this; the laboratories have not been idle during the last five years—you can buy good paint now at reasonable cost which will cover from 50 per cent to 100 per cent more surface than used to be the case. The new lacquers and enamels offer a rainbow range of color schemes for both interiors and exteriors. How do you like the use of outside varnish over stain for English type house exteriors?

Gingerbread—that deplorable architectural dream of fifteen to thirty years ago—is still to be found disfiguring many an otherwise good building. Tear it off! Frills and folderols are ancient history nowadays.

If the structure is faced with stone or one of the excellent imitations, dinginess can be removed by sandblasting, an acid wash, or cold steam cleaning. If you are not familiar with this particular type of work, you will find an expert in the nearest large city.

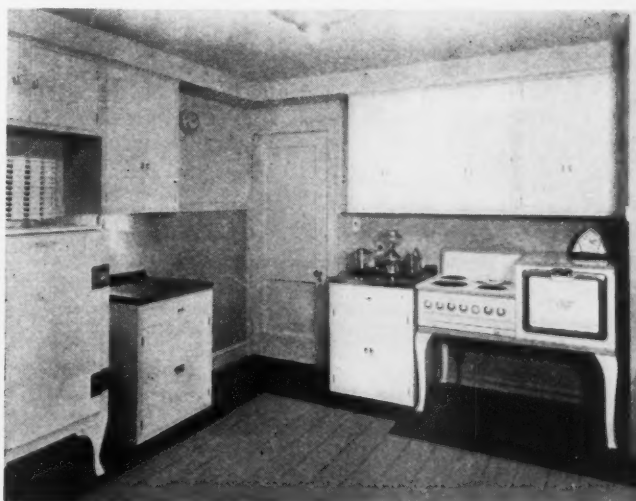
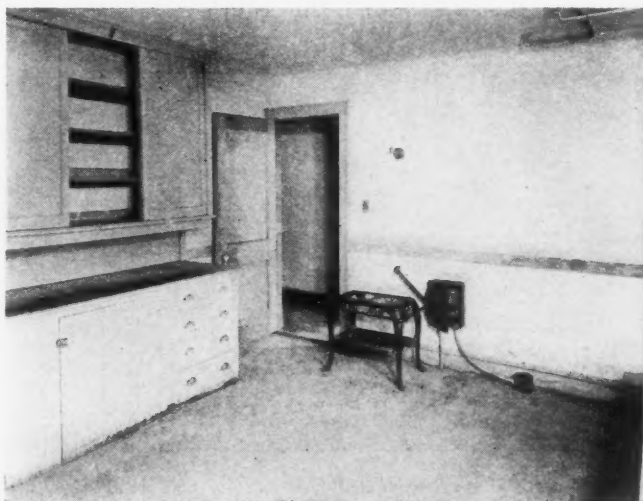
In large buildings "bird cage" elevators and open grills will be found. This makes it almost impossible to control temperatures. Modern elevators and eleva-



For needed repair and to improve appearance, shingles are popular. Photo above shows interesting example of wood shingles being used to over coat stucco.



At right: Monel Metal sink, cupboards and other improvements installed in old kitchen shown at left, below. Illustration at right below shows how modern electric range, refrigeration, cupboard equipment, etc., transformed an old, out of date kitchen into a modern, efficient workshop. Appearance, utility and convenience are improved by these changes.





tor enclosures will make the halls more cheerful, quieter and less drafty.

In other words, examine each prospective job inside and out, making notes of the surfaces which are in poor condition, shabby in appearance, or cheerless. The old adage that "Beauty is but skin deep" applies with considerable force to this part of modernization work. In some cases structural changes may be required, but for nine out of ten jobs improvement in appearance will be made through surface changes alone.

#### Interior Surfaces

Wall surfaces should be carefully examined to discover sections where the plaster bond has broken; bulging plaster, unless entirely sound, should be torn off and replaced. Wall tile should be examined to make sure none of the tiles are loose. Plan to re-paper where old wallpaper is hanging fast only in spots.

To refinish interior wall surfaces there is a wider range of materials today than ever before. The new

paints, lacquers, varnishes, enamels and stain treatments will enable you to produce almost any color effect desired; plastic paint, though not so popular as a few years ago, will nevertheless enable you to reproduce many classic textures. Interior wood and other trim material can be re-varnished, enameled, lacquered, etc., to harmonize with the general color scheme. Paint and wallpaper provide excellent solutions of the interior wall surface re-finishing job at modest expense, with possible effects ranging from the very dignified to the very gay.

The modern plywoods offer great opportunities to obtain all of the effects of costly panelwork at comparatively low cost. Floor and wall tiles, both genuine clay products and the excellent synthetic manufactures, provide excellent solutions for those areas which must have more color and charm as well as greater resistance to wear; tints and shades of many pleasing colors are readily available in stock size and work in quite naturally for reconditioning bathrooms, kitchens, etc.

Linoleum, with its great range of patterns and colors,

### BUILT IN 1882—REMODELED IN 1933 FOR \$600

**I**N 1865 Soloman Stutsman erected a log cabin on ground which is now designated as East 8th Street and University Avenue, Des Moines, Iowa. The logs were taken from a powder house originally part of the Ft. Des Moines Army Post. Today, as the illustration shows, the old timbers still serve, after approximately 85 years in use, a tribute to "permanent construction."



Original Stutsman log home erected in 1865 and now used as a tool house; this is a fine example of the longevity of wood as a construction material.

In 1882 Mr. Stutsman erected the residence pictured at left below and recently his daughter visited the office of the Century Lumber Company to discuss with them the possibility of modernizing the appearance of the Stutsman home. A representative inspected the property and found the structure to be sound and in a good state of repair, although its appearance left much to be desired. A great deal of useless ornamentation was removed, such as the fancy iron railing surrounding the tops of two bay windows which projected up through the porch roof. Structural difficulties made it practically impossible to take out the projecting tops of these bay windows, so a railing was erected around the entire porch roof, improving the appearance.

Scroll-sawed gable ornaments were torn away. Turned columns on the porches were boxed in, then the exterior was covered with wood shingles in four blending shades of gray. Minor repairs where needed, a flower box or two, ivory trim paint and green paint for the shutters completed the job.

Total cost for all work amounted to less than \$600 and the owner is very pleased with the results. Comments from neighbors have been very complimentary and, of course, the local building professionals profited from the transaction. This job, which had to do almost entirely with the problem of appearance, has stimulated additional modernization business in Des Moines.



BEFORE—Des Moines house as built in 1882



AFTER—as remodeled last year for only \$600

is now being widely used as a wall covering material, in addition to its well known usefulness underfoot.

Cork, rubber and various composition materials are offered for both floors and walls, as well as our old friend, wood, both in parquetry and the usual hardwood floorings. Marble, black glass and synthetic products of similar appearance should not be overlooked in the more pretentious interiors.

In addition to interior surfaces, there are a few other items which should be noted. Are the electric fixtures effective, or should they be replaced with more modern equipment? See if the radiators are of 1900 vintage; concealed radiation allows more usable floor space and enhances the appearance of the room. Ugly built-ins should be taken out, lock-stock-and-barrel; substitute fixtures which are set in the walls or which have lines more in harmony with revised concepts.

### Exterior Appearance

Outside, the original type of surface may or may not determine the limit of change possibilities. Here, paint again offers a solution in many cases, with a wide choice of color schemes. Old roofs may be recovered with wood, asphalt, asbestos, special composition shingles; side walls can likewise be revived by the use of these modern materials in a number of designs and applications.

There are a number of "imitation brick" materials, some of which have considerable insulating value, which can be applied over old clapboards, shingles or stucco. Also, in some cases, regular brick veneer will be found practicable.

Be sure to investigate the many new metal mouldings in aluminum, chromium and stainless steel for store front work. Limestone, terra cotta, marble, black glass, micarta and formica, tile and a vast array of more synthetic products can be used to metamorphose exterior appearances, especially on non-residential structures. For all kinds of mercantile establishments the outside appearance is of prime importance because people prefer to enter attractive shops.

Then devote a few minutes (or more) to a study of the proportions of the building and its parts. Perhaps the addition or elimination of a marquis, shed, balcony, cupola or porch will change for the better the appearance of the entire property. Does the residence need blinds or shutters, or should these be removed? Many

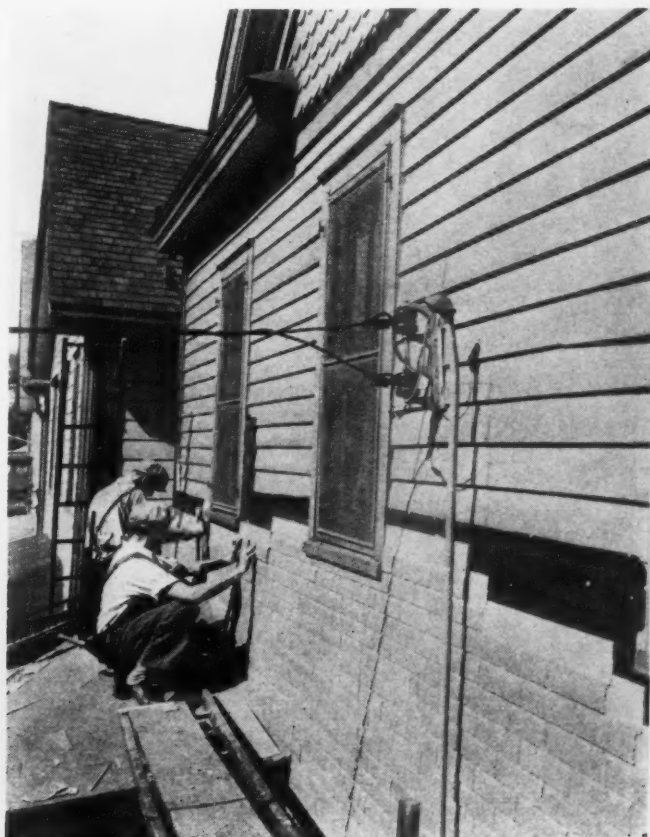
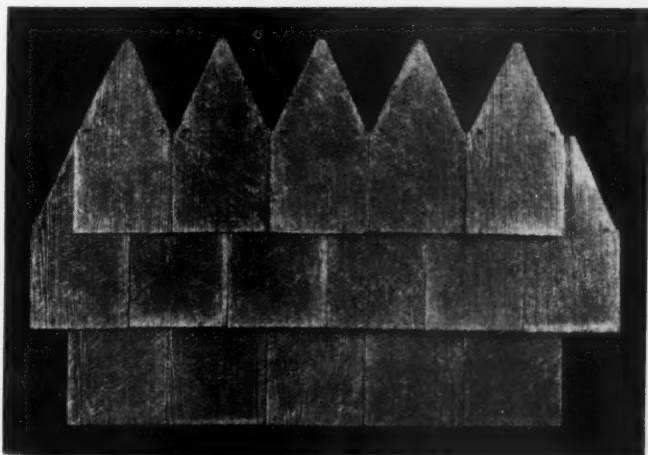
a sound, old time house can be completely altered in appearance by eliminating, or cutting off two-thirds of the wide cornice. It is often unnecessary to make more than minor changes of this nature greatly to improve the property. Look it over and visualize changes which you think should be made.

Landscaping should not be overlooked. A few carefully selected pieces of shrubbery, grading for more pleasing contours, can easily change a "place" to an "estate." You will find landscape architects, gardeners and nurserymen ready with splendid co-operation. Only be careful not to "overdo" this part of the job; too much outside "atmosphere" is just as bad as too little. Perhaps the best plan is to rely on the advice of some person of excellent taste and experience, if you feel at all doubtful of your own ability along these lines.

As you examine properties many other improvements will suggest themselves to you. Your estimating book should contain price data covering all of the materials which will be needed to do a complete job; if you do not have complete information at hand, by all means go after it. All in all, this first major problem in modernization is most readily solved by good powers of observation, making notes of the present condition of the surfaces, and the application of your knowledge of materials and methods. You have little serious competition if you undertake the entire modernization job, for there are comparatively few persons competent to advise and suggest, except building professionals. Sell a *complete* modernization job!

The principal danger is to the contractor who considers appearance the only problem in modernization; appearance is, on the other hand, only one of the four major problems involved.

A new type composition shingle made of asbestos and cement. Because the upper corners are cut off, it is claimed this shingle saves 30 per cent of the material cost.



Mechanics applying brick-type asbestos siding over clapboards. For low cost modernization of exterior surfaces this material has been found to offer excellent service, with low first cost and maintenance.



## PROBLEM II: Convenience and Utility

Many a structure which presents an excellent appearance is nevertheless highly unsatisfactory to its present occupants. Homes of people of wealth and charm are often disfigured by trailing bridge and floor lamp wires—too few convenience outlets have been installed by the original builder. Kitchens tire housewives in a few hours because of the unnecessary steps which must be taken due to inefficient kitchen layout. Floors, old and worn, require twice the effort to keep them clean, in both homes and business buildings. Literally thousands of offices subject employees to health-endangering drafts the minute a window is opened. How many times do you hear people complain, when there are five or six in the family, and only one bathroom?

Convenience and utility, the second major problem in modernization service, should always be kept in mind when a prospective contract is being solicited. Probably the best way to tackle this problem is by studying the habits of the people who use the building, and making notes covering lack of conveniences or adequate facilities. Checking these items is a little more difficult than examination of surfaces, as in the study of remedies to correct appearances; your ability to please your clients along these lines will, however, build you a reputation of substantial value in your community.

Electrical equipment is particularly important when you are trying to increase convenience and utility; a majority of the office and other commercial buildings have inadequate race-ways for wires, for example. In-

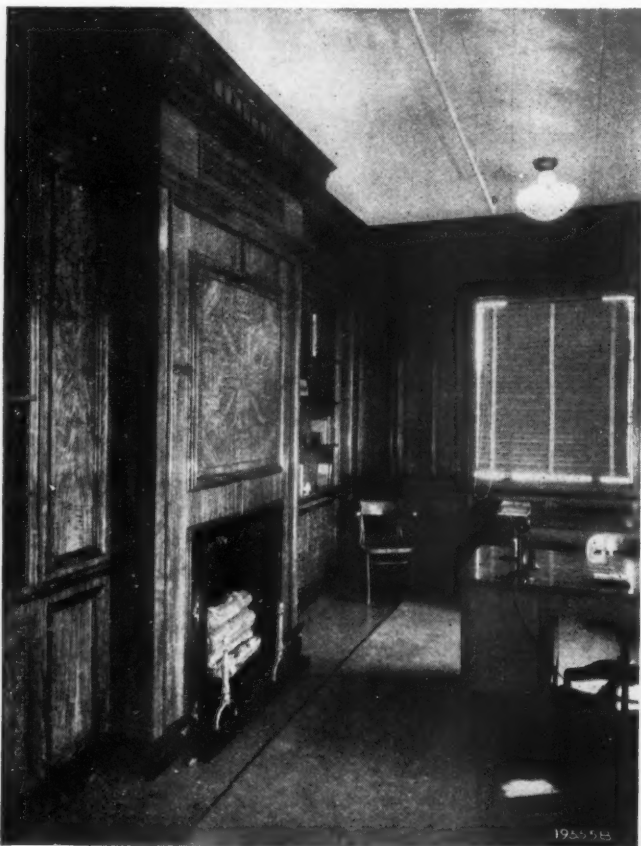
stallation of hollow base or some other form of race-way product will remedy this in many cases; one or more extra circuits for convenience outlets in the home will add greatly to the utility of any residence.

Convenience and utility for the contractor are important factors; products which soon require servicing or repairs are unprofitable. For instance, a recent letter from a manufacturer of flush valves reads: "Our valve is of particular interest to contractors and builders because of the long life that has been enjoyed on many installations without the necessity of servicing." Doing a job that will be satisfactory over a period of time, instead of temporarily, is not only a great safeguard against future "grief" but also adds to the reputation of the local builder as time goes on.

"I will never build another house," a Brooklyn builder told the writer recently, "without at least one toilet-and-lavatory adjoining every bedroom, and at least one toilet-and-lavatory on the first floor if the bathroom is upstairs. To my mind that one feature is a necessity in all houses." He added that a toilet-and-lavatory can be installed with communicating doors to two bedrooms to save cost. In studying modernizing jobs it should be borne in mind that adding one or two toilet-and-lavatory rooms may solve half a dozen annoying problems for the occupants.

The proper location of doorways, elimination or addition of partitions, a check to prove the heating plant has sufficient capacity and examination of the thermostatic controls (or provision of same), a study of window sizes and location with relation to proper daylighting—these are just a few of the convenience and utility "angles" which you must study. Making notes while you are on the job is a fine way to cover these points the first time you visit the property.

**EDITOR'S NOTE:** Next month the other two problems found in modernization work will be discussed. Problem three, which has to do with extending the useful life of a structure deals largely with repair and maintenance work and the materials which are available for this purpose. Problem four will discuss the creation of new concepts of living, such as air conditioning, window glass which allows entrance of the most beneficial rays of sunlight, etc. The information contained in this article should be in the files of every builder and contractor who is interested in modernization work.



An office paneled in micarta, one of the new synthetic materials of unusual merit.

Richly inlaid sign of micarta, as used for an A. & P. store front near Boston, Mass.





## Rubber Tile Revives

# Old Commercial Floors

By H. B. HILLS

**T**HERE are several factors that a manager of rentable business property must consider when his building reaches a point where remodeling or modernization becomes either highly desirable or imperative. He must consider, of course, the financial aspects; whether or not his planned improvements are temporary or permanent, whether the improvements will improve his property sufficiently to attract new tenants, and whether the remodeling makes his building compare favorably with more competitive structures. When the manager's deliberations have reached the point of actual areas to be modernized and actual materials to be considered, one of the first thoughts is inevitably floors and wainscoting.

Rubber tile has been on the market a sufficient length of time to prove its ability to withstand the hardships of use in commercial buildings. Through modern maintenance methods such as the use of power buffing machines and application of the new rubber polishes, the costs of keeping rubber tile looking its best are satisfactorily low. Particularly in corridors, which in older buildings are often dark and unattractive when compared to modern structures, the bright colors of rubber tile add materially to the appearance of the interior, at the same time silencing foot traffic. Not only can floors be improved with rubber tile, but the wainscoting too may be treated to carry the color scheme up the walls. A feature of this wainscot application of rubber in either tile or sheet form is that it eliminates the constant problem of painting and varnishing. An infrequent wiping with damp cloth and an occasional waxing will keep rubber in prime condition. The pattern and color combinations possible with rubber tile are almost unlimited. There

are many marbled types being installed today, as well as reproductions of wood effects with which age-old parquet patterns can be worked out. This latter type of rubber flooring is particularly suited for private office spaces where appearance is an important factor.

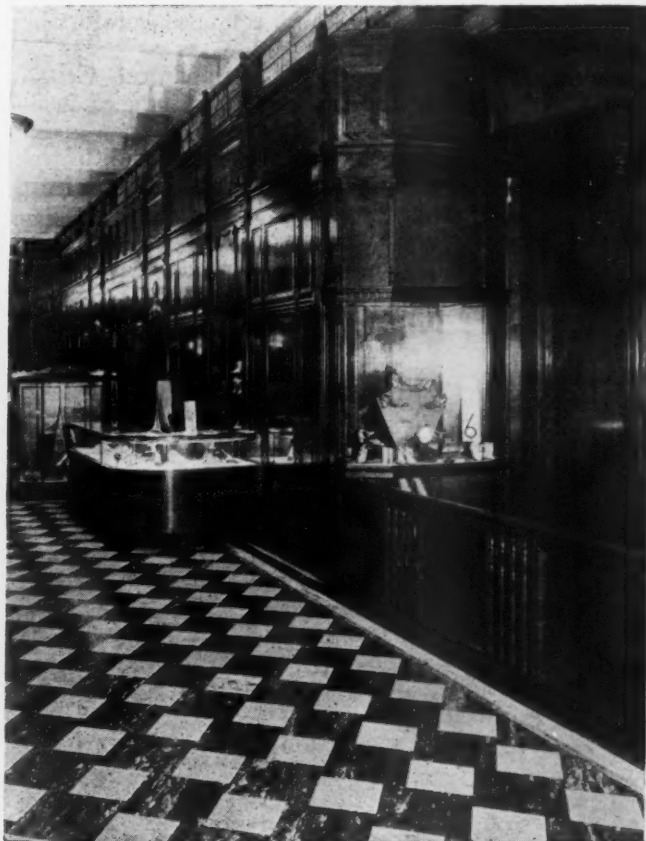
Rubber tile may be considered a floor covering which will last indefinitely when properly maintained. A building manager in Texas writes, "... We installed rubber tile in this building on the first floor of the elevator lobby which is also the entrance to the bank and after nine years accommodating approximately 25,000 people daily the rubber tile floor does not show any wear whatsoever. I believe that rubber tile will show the lowest cost of maintenance of any floor material."

Rubber tile floors can be satisfactorily installed over wood or concrete sub-floors that are above grade. In fact, any smooth, level, dry surface is sufficient as an underfloor. The installation process is very rapid and only small areas need be put out of use at a time. Rubber wainscoting can be applied to any smooth, sound wall surface capable of holding the weight of the material, which is comparatively light.

A final word in caution regarding the actual selection of a particular brand: consider the past performances and history of the particular brands offered.



Rubber tile flooring in corridor of General Motors Building, Detroit



Rubber tile in the Innes Shoe Store, Los Angeles, Calif.

# 1934 World's Fair Homes Show Progress

New Features in Home Planning  
and Building to Be Displayed on  
Chicago's Lake Front This Summer

**T**HE modern home in its new architecture, with new furnishing and decoration and the new scientific equipment for labor-saving and for health, are to be special features of the World's Fair of 1934.

Four small country homes, including two farm homes, have been added to last year's exhibit of houses completely furnished, decorated and equipped for living. The ten small houses in the Home and Industrial Arts group will be entirely refurnished and redecorated. New ideas developed in the past months and from the experience of last year's Fair will be seen.

So much attention has been directed in the past year toward the economic and attractive possibilities of country living that the modern farm and country-life homes that have been built as exhibits for the Fair of 1934 will be of special interest. Three of these houses are in appropriate settings in the outdoor farm exhibits area.

## Will Feature Model Farm Homes

The Model Farm House, developed by architects Holsman and Holsman of Chicago as the exhibit of the Crowell Publishing Company, is an example of the new ideas of comfort and efficiency applied to the home of a practical farm operator. The living quarters of the family are private and separate from the daily work contacts of the farm home. The garage, dairy machines room, work-bench and repair room, wash room for the assistants, and other working spaces are on the ground floor of the house. The private family quarters on the second floor will be those of a well equipped, comfortable modern home.

The Country Home developed by architect George Fred Keck of Chicago presents a different type of farmer's dwelling in which the emphasis is laid upon giving the rural family all modern comforts. Like the Crowell home there is a degree of separation from the barn-yard tasks when work is done for the day. The house has eight rooms, including a large modern living room and four bedrooms, each opening on a terrace. There will be

one bath room on the upper floor and a modern kitchen.

Also in the farm area will be found the all-steel "Flivver" house developed by the Universal House Corporation of Zanesville, Ohio. While it is not entitled a "subsistence house" it fits into that picture of a scientific modern dwelling of small cost that may be placed wherever desired.

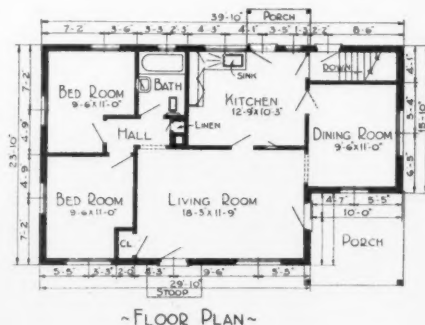
The plan includes living-room, two bedrooms, nursery, kitchen and bath. There is a large, open air porch. Flat roof deck provides additional recreation space.

Another house offering instructive comparison with the Government standard economical garden type home is the Stran-Steel House. It will be framed with the well-known Stran-Steel channel frame units which will be brick-veneered, the whole comprising a modern, comfortable home for a small family. The famous Stran-Steel Good Housekeeping House of last year will be completely refurnished and redecorated.

A guest cottage in the garden is to be added to the Armco-Ferro-Enamel house in the Home and Industrial Arts group. All the gardens of this group will have the advantage of a year's growth of shrubs and perennials as well as of additions and improvements to the garden plans. The Armco-Ferro-Enamel guest cottage will be in a corner of the garden and will include a bedroom, bath and kitchenette. It suggests a possible use as servants' quarters or for overflow of visitors.

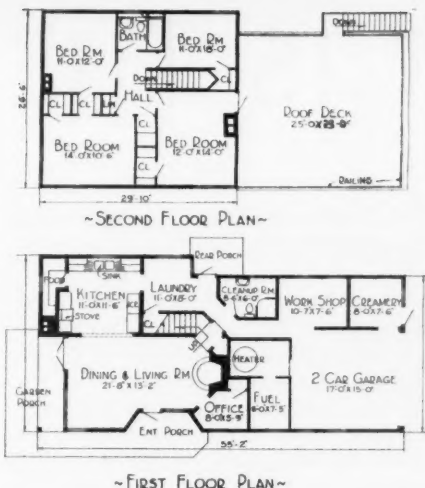
Re-decoration of the Masonite house has been assigned to Grover J. Daly of Chicago. Firms participating in the refurnishing include the Wheeler-Okell Co. of Nashville, Tenn., who will do the bedrooms, and the Howell Co., of Geneva, Ill., who will supply the furniture for the outdoor terraces and roof decks.

A striking change will be seen in the Brick house which is to be painted white all over with Zemcolite. This is a mat surface coating through which the texture of the brick and joints will show. All the interior walls will be plastered and decorated and the brick floors of the bedrooms will be covered with permanent flooring, probably linoleum. Ground-down and polished brick floors will



Cost-Key-1.106-127-870-37-14-13.

Garden Home of Stran-Steel Construction to be exhibited at the 1934 Century of Progress this summer.



The Country Home, a Crowell Publication, is to display this modernistic farm house. Holsman & Holsman, architects.

be retained in the living room and other parts of the house, which will be entirely done over in accordance with the new interior color scheme.

The Lumber house is being refurnished and decorated on a budget plan prepared after a national survey of incomes of small families by the National Association of Retail Furniture Dealers. The furnishing is divided into three classes: Essentials, for which \$1,000 is allowed; Conveniences, \$400; and Luxuries, \$400. Retail stores throughout the United States probably will reproduce different rooms of the Lumber house in their floor displays.

Among the essentials are included such items as a three piece bedroom suite, rugs, dining suite and other fundamentals. The plan holds to the practical, it is announced, but beauty will not be disregarded. It is expected that the influence of the modern homes group at the Fair will be reflected by manufacturers preparing for mass production of modern furniture.

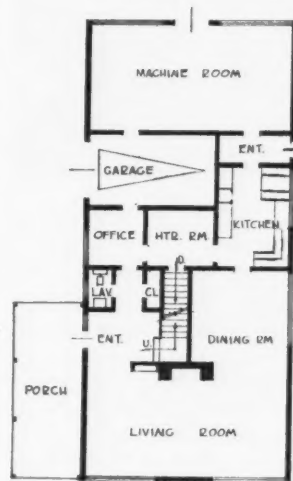
#### Glass To Be Widely Used

The Florida tropical home is to be redecorated this year by Marjorie Thorsch of Chicago who last year decorated the Masonite House. The Southern Cypress House will show this year a more elaborate display of the uses of cypress in building and decoration. In addition it will have in the adjoining garden a wood-working shop in which demonstrations will be given of carving quaint bird and animal heads suggested by the shapes of cypress "knees." The Rostone House will be seen entirely redecorated.

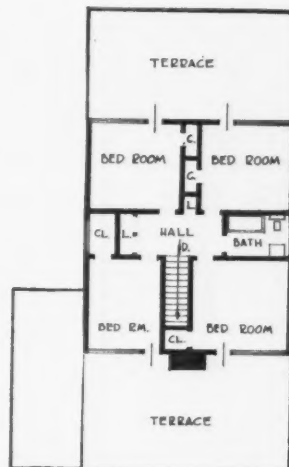
The "House of Tomorrow"—the all-glass house which with its daring novelties of construction—all air-conditioned, all glass walls around the circular living quarters with no windows that can be opened, will be changed in appearance this year by the use of copper as exterior metal. The interior will be entirely done over and refurnished in accordance with the ultra-modern tendency of the plan, as last year.

The colored crystal palace of the Owens-Illinois company, built of glass bricks with an illuminated glass tower, is to be entirely redecorated inside. Besides an elaborate display of modern glass ware for table and decorative use there will be an historical display of fine old glass. A series of models of store fronts and factory units built of miniature glass bricks, three-eighths inch long, will be shown. The terrace outside overlooking the lake will be made into an attractive resting place. At night the tower will be illuminated in three colors.

A large display of modern art pottery will be shown by the Haeger Potteries, Inc., of Dundee, Ill., in the house that was occupied last year by W. & J. Sloane of New York. In addition to taking this house for their display the Haeger Potteries will build an ell, larger than the house, which will house a complete factory unit in operation, going through all the phases of making art ware, including shaping, baking and hand decorating.

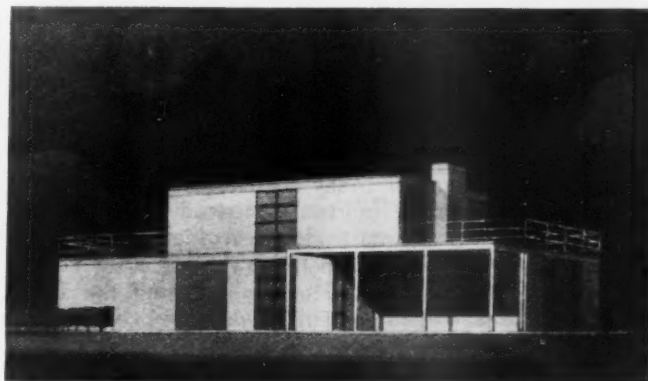


FIRST FLOOR PLAN



SECOND FLOOR PLAN

GEORGE FRED KECK ARCHITECT



A country home for the city man (of advanced ideas) by Architect George F. Keck who designed the "House of Tomorrow" last year.



# HOW IMPORTANT IS THE

**W**HENEVER a particularly bothersome question arises in the editorial offices of the *AMERICAN BUILDER* it is customary to ask the active men of the building field for their expressions. Recently there has been much discussion about electrical equipment (including wiring, fixtures and appliances) for homes and other buildings. To ascertain the degree of interest, and to answer certain pertinent questions, an *AMERICAN BUILDER* questionnaire was sent to a group of contractor-builder readers; the response, amounting to about 20 per cent, makes an interesting story.

Charts in the February issue showed how the U. S. Department of Labor estimates that  $4\frac{1}{2}$  per cent of the total cost of a residential job is absorbed by the electrical work; it is very interesting to note that the average amount reported by contractors and builders answering the *AMERICAN BUILDER* questionnaire was also  $4\frac{1}{2}$  per cent. The fact that the *AMERICAN BUILDER* survey agrees exactly with the U. S. Department of Labor figures in this respect makes reasonable the assumption



Four-fifths of the contractors and builders claim their clients will buy more electrical equipment.

that other information obtained by this method is reasonably reliable. There was no reason why contractors and builders should do otherwise than answer truthfully; these answers, and their analysis, will undoubtedly be of considerable interest and value to other readers.

Approximately 20 questions were asked in the *AMERICAN BUILDER* electrical survey and the replies received indicate quite clearly that electrical matters are of interest to a majority of the readers of this publication who received questionnaires. Of course there is some difference of opinion, due in part no doubt to the different kinds of work featured by different readers, in general, however, the summaries of answers point rather clearly in one direction.

Have some contractors and builders been overlooking the possibility for additional profit through featuring electrical equipment? Is it true that electrical equipment (including wiring, fixtures and appliances) is much more important to the builder today than it was a few years ago? Can prospects be induced to spend a little more money to provide adequate electrical facilities? These questions and others have a definite value for the active builder and contractor; this survey presents the facts as reported by active, successful builders and contractors in various sections.

More than half the contractors and builders replied that they have featured electrical equipment in soliciting both new work and modernization jobs. Since these statements were made voluntarily and were quite

definite, it is evident that more than half of these active men of the building industry appreciate the importance which prospective clients attach to electrical equipment. Other contractors and builders who have not been stressing the electrical work may find that they have been overlooking considerable additional profit as well as a good sales argument for closing new contracts.

To the question "Have you found prospects interested?" 40 per cent replied "Yes," 10 per cent said "No" and the other 50 per cent did not answer. Study of these replies shows that the contractors and builders who featured electrical matters found their prospects interested; perhaps the only reason why half the contractors and builders could not answer this question in the affirmative was due to the fact that they had never tried to find out.

In department stores, model homes, permanent and temporary building displays and other places, the marvels made possible by modern electrical equipment are brought to the attention of hundreds of thousands of people daily. Builders and contractors generally can cash in on this interest on the part of the general public; our survey serves simply to make more definitely apparent a sales opportunity which exists in every town and city throughout the country today.

## Co-operation of Manufacturers Asked

To find out if contractors and builders were receiving business literature about electrical matters, one of the requests for information covered this point. Three-quarters of those who replied said they are not receiving much literature about electrical matters from manufacturers; one-fourth reported that they are receiving needed information of this kind.

The question was then asked "Would you like to have more definite and complete electrical information?" More emphasis on the desire of contractors and builders to be thoroughly up to date regarding electrical matters is presented by the answers to this question—80 per cent



Eighty per cent of the builders and contractors are willing to feature electrical equipment more strongly.

stated definitely that they would like to have such information and only 20 per cent said "No."

After finding out that contractors and builders would like to have more definite and complete electrical information, it was decided to try to find out what these active men of the building industry would do with such information if they had it. This question was phrased as follows: "If you had sufficient information, would you feature electrical facilities more strongly?" Again

# ELECTRICAL WORK?

80 per cent of the replies were in the affirmative, only 20 per cent answering "No" or failing to reply.

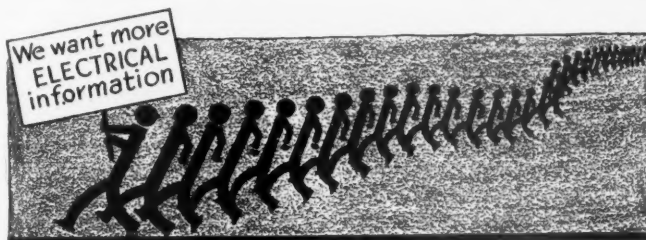
From these replies it is clear that, while the general public has developed a growing interest in adequate electrical facilities, only half the builders have been making capital of this feature, and there has been too little cooperation between manufacturers of electrical products and the men in the field. Of course it is a good opportunity for the manufacturers because this survey shows that more than half of the active contractors and builders in the field will welcome at once any such attempt at co-operation, without any need for "high pressure" sales promotion.

## Need of Education Revealed

Great advances have been made, and are being made almost daily, in the development of electrical products and in the methods of providing more adequate electrical facilities for all kinds of buildings. This means that houses which were built only a few years ago do not have the facilities required today. In spite of this fact approximately 40 per cent of the builders and contractors answering stated that they believe the average home is adequately wired! More than half (60 per cent, to be exact) claimed the average home is not adequately wired. It would seem reasonable to assume, comparing these replies with the other information revealed by the questionnaires, that the builders and contractors who have not featured electrical facilities have not realized the importance of the subject. On the other hand, the large number of requests for additional information indicate that a very large majority feel they should know more about the subject.

As was pointed out in last month's issue, adequate wiring is basic to thorough satisfaction on the part of the prospective owner or occupant of a building, in regard to both immediate and future enjoyment of electrical facilities. Almost daily new appliances and devices are being developed and announced, with the result that electricity is rapidly becoming more and more important in both residential and non-residential structures. Builders should therefore make provision for these appliances in order that their clients will be able to express a lasting satisfaction in the work.

A better understanding of the importance of electricity



They all agreed on this!

*Summary*

Your Name all replies Title \_\_\_\_\_

Firm or Organisation Name \_\_\_\_\_

Street Address \_\_\_\_\_ Town, etc. \_\_\_\_\_

A. How much do you normally spend for wiring, fixtures and appliances in the following types of work?

	Amount	% of Total Job
Residences costing LESS than \$5,000	\$160 - \$200	or 4%
" " " MORE " "	\$207 up	or 4 1/2%
Modernising jobs costing LESS than \$500	\$25 - \$40	or 5%
" " " MORE " "	\$150 up	or 4%

B. Have you ever featured electrical equipment (including wiring, fixtures and appliances) in soliciting new building work? 52% Yes; 48% No

Have you ever featured this in soliciting modernization, alteration and repair work? 52% Yes; 48% No

If so, have you found prospects interested? "Yes" 40%; "No" 10%; No ans 50%

If you have not featured electrical matters, why not? \_\_\_\_\_

C. Do you receive much literature about electrical matters from manufacturers of wiring, and related devices, equipment and appliances? "Yes" - 25%; "No" - 75%

Would you like to have more definite and complete electrical information? "Yes" - 80%; "No" + No ans - 20%

If you had sufficient information, would you feature electrical facilities more strongly? "Yes" - 80%; "No" + No ans - 20%

D. Do you think the average home is adequately wired? 40% Yes; 60% No

Do you think, if you were in possession of all the facts, you could make the prospective owner or client see the advantage of extra expenditure \_\_\_\_\_

Typical questionnaire form showing summaries of answers to a few of the questions.

in modern building can be fairly easily and quickly obtained by contractors and builders, together with reliable information about specific products, through manufacturers' literature, standard up to date textbooks on the subject, local displays, etc. Unquestionably the manufacturers of high grade electrical products are very glad to co-operate to the fullest extent; closer co-operation between the manufacturers and the active men in the field, therefore, should not be difficult to obtain, especially in view of the fact that both groups are interested in the results which are bound to benefit them mutually.

Regardless of the academic value of greater education in electrical matters, however, consideration must be addressed to the practical viewpoint. Will such additional education pay both the men in the field and the manufacturers? To determine this point a very frank question was asked "Do you think, if you were in possession of all the facts, you could make prospective clients see the advantage of extra expenditure for more complete and satisfactory electrical equipment?"

In reply contractors and builders unhesitatingly answered as follows: 80 per cent "Yes;" 20 per cent "No." The need for electrical information is great.

# How to Estimate the "Cost-Key" Way

By A. W. HOLT

Author of "Holt-Bid" and "House Valuator"  
Systems of Rapid Accurate Estimating

**A**FTER many years of considering the problems of estimating that beset building contractors and retail lumber dealers, the Merchandising Council of the several retail lumber dealers associations recognized the fact that the building industry sorely needed a better measuring-stick for determining the true cost of a proposed building. The House Valuator was accepted as the most logical system and adopted by the Merchandising Council not only because of its simplicity but for many other reasons, among which is this: it affords a good basis for co-operation between the two most important factors in the planning and constructing of a home—the contractor and the dealer.

The AMERICAN BUILDER with its wide circulation among the contractors and retail dealers has co-operated in making the Cost-Key or House Valuator system more widely used by the publishing of Cost-keys with all home plans and designs published in this magazine.

## A Safe System

Volumes have been written of the sad stories of contractors who have taken jobs on which one or more of the thousand items that enter into a bid have been "overlooked." Even if there was no code of ethics such as the new Contractors' Code, the day is past when a sensible contractor wants to gamble in submitting a bid or estimate. The House Valuator system forestalls the element of gambling: it is safe and sound for it is based on the self evident fact that

*If the superstructure of House B (see diagram) cost twice as much as the superstructure of House A of like construction in one locality, it will cost practically twice as much in a neighboring locality and every where else.*

The problem then is to find the cost of House A in your locality which, once obtained, is the basis for figuring the superstructure of any house of like construction in your locality. The cost of the superstructure of

House A is your BASIC HOUSE cost for your locality—your local "KEY." It is the basis for your rapid but accurate estimating system.

## The Basic House

The Basic House illustrated on the next page is a very simple structure, a very ordinary one story house. Yet it is fundamentally the same as ALL houses for it has floor joists, flooring, rafters, roofing, wall materials, doors, windows, and everything essential to all houses everywhere. Material and labor prices vary according to location of course, hence (addressing each contractor reader personally) you must figure your local material and labor costs to establish your local cost of the "Basic House," shown on opposite page, in YOUR community built of YOUR usual or desired construction at YOUR current prices for materials and at YOUR wage scale. In fine, figure this house above the foundation, as you think it should be built, WITHOUT built-in cabinets, plumbing, heating, lighting and other "variable features" which vary according to individual choice. Your lumber dealer who is familiar with material cost, can help you determine this and thereby provide this key. Once you have done this you have established your *local key* to any house plan or design published in the AMERICAN BUILDER.

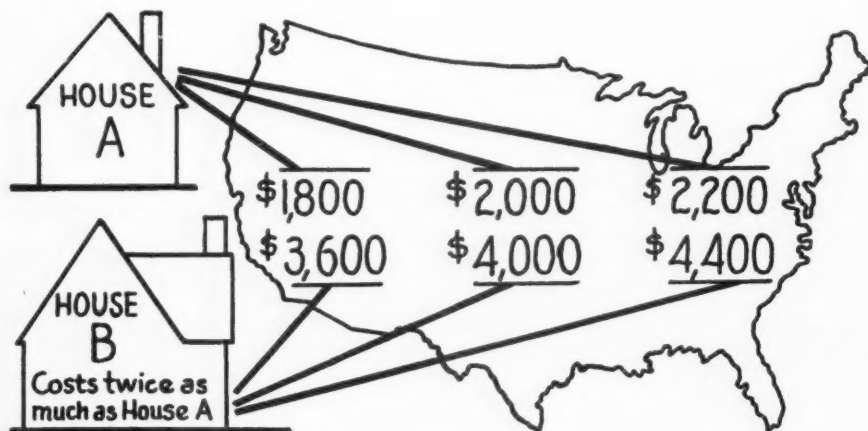
## Local Material Costs

Due to their familiarity with material prices and their personal contact with all connected with the building trades, dealers were selected by the Merchandising Council to dispense the necessary information relative to the material list for the Basic House. Consult your local dealer and have him figure this for you. This takes but a short time and involves little labor. (In case your dealer does not have the material list available he can obtain it either from the secretary of his state or regional association, or by writing to the editor of the AMERICAN

BUILDER. In this way you obtain your *local key*. This article explains how to use that key with the Holt-Rate key that appears under each house design in this publication.

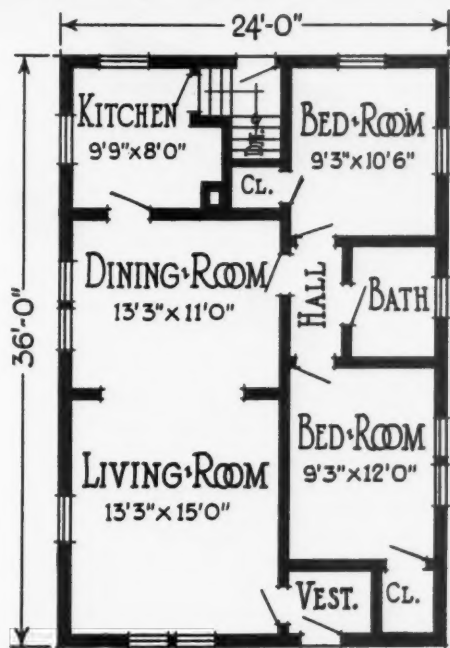
## Two Keys Required

Like the two keys required to open a safe deposit box in a bank, two keys are required to open the door to YOUR reliable cost of AMERICAN BUILDER designs. You and your lumber dealer working in co-operation supply your *local key*, and the second, or "Holt-Rate" is supplied by the AMERICAN BUILDER. This "Holt-Rate Cost-Key" is composed of six sets of figures which always appear in the following order:



The principle on which the "Cost-Key" system of estimating is based is diagrammed here. Your Basic House Cost corresponds to the cost of House A. By multiplying the Basic House Cost by the Cost Rate you get the cost of building that house at current prices and local building standards in your community.





• FLOOR PLANS AND ELEVATIONS OF THE BASIC HOUSE •  
ONE STORY, SIX MAJOR AND FIVE MINOR ROOMS, 24'x36'-8'-6" CEILING, 1/3 PITCH, 24" CORNICE

0.000 cost- rate	000 Lin. Ft. Founda- tion	0000 Sq. Ft. Floor	00 Yds. Excav. per ft. deep	00 Sqs. of Wall	00 Sqs. of Roof
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These are illustrated under the house design on this page in the order of 1.695—157—1470—60—20—22.

#### Cost-rate

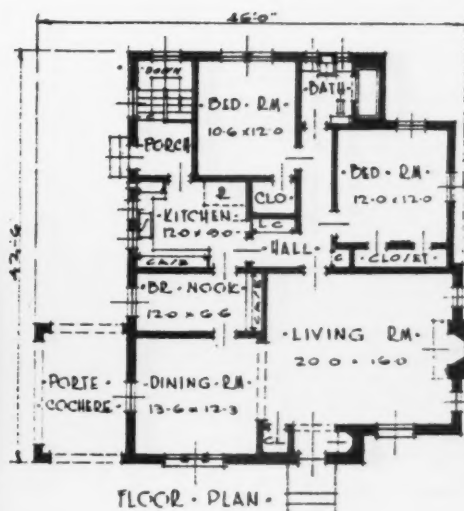
The first set of figures, 1.695, is the "cost-rate" or coefficient, and gives the ratio of cost of the superstructure of this house as compared to the Basic House, decimally. This is the same as 69½ per cent more than the Basic

House because 1.695 is 69½ per cent more than one, which always represents the cost-rate of the Basic House. If your price of the superstructure of the Basic House is \$2,000.00, this particular house will cost 1.695 times \$2,000.00 or \$3,390.00 above the foundation if built of the very same specifications as your Basic House. Regardless of what materials are shown by the picture, you always will be figuring the same kind of materials for all other houses as you figure for the Basic House. The specifications you adopt for your Basic House are termed your Standard Specifications. Any variation from your Standard makes it a Special Specification. All such changes are easily computed, however, as will be

(Continued to page 67)



Cost Key 1.695—157—1470—60—20—22

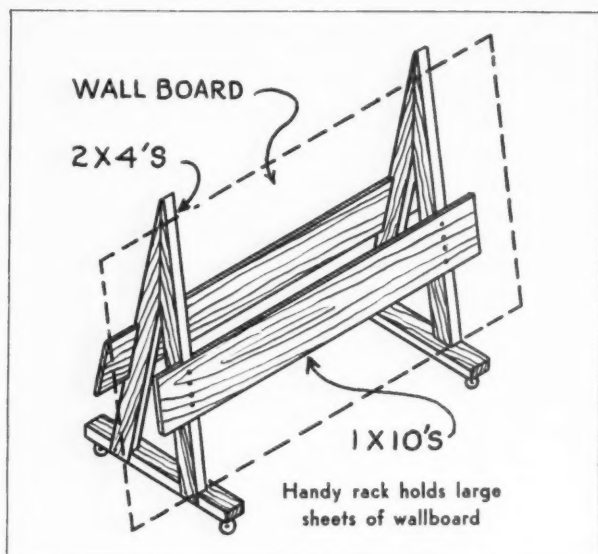


# PRACTICAL JOB POINTERS

A READERS' EXCHANGE of tested ideas and methods, taken from their own building experience. Two dollars or a year's subscription to American Builder is paid for each item published. State business connection or trade.

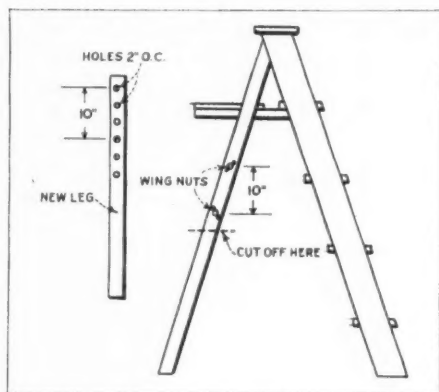
## For Handling Wall Board

THE "contraption" below is for carrying or holding wallboard of any kind while applying to wall and ceiling. It will hold enough wallboard for an ordinary room and can be moved from one side of the room to another, or from one room to another. It is built of 2 x 4's and 1 x 10 cross pieces, the A's about 6 feet apart. Heavy casters underneath provide easy moving. This rig also is handy in a dealer's warehouse.—HENRY J. VOLLMER, Yard Foreman, East Helena, Mont.

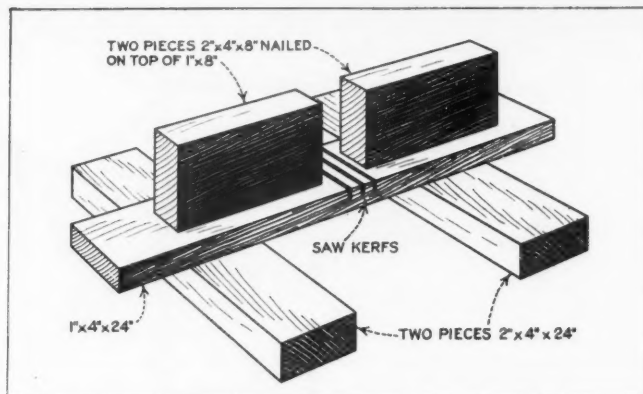


## Adjustable Stepladder

I AM sending a kink for making a stepladder adaptable to work on stairs or other uneven places. I took an ordinary stepladder, sawed the legs off and made new legs as shown below. This ladder may also have a set of legs made long enough to work from the top of the stairs downward.—HAROLD SNYDER, Kenilworth, N. J.



Adjustable stepladder can be used on stairs and uneven surfaces.



Simple type of door jack; easy to make, easy to use.

## Simple Door Jack

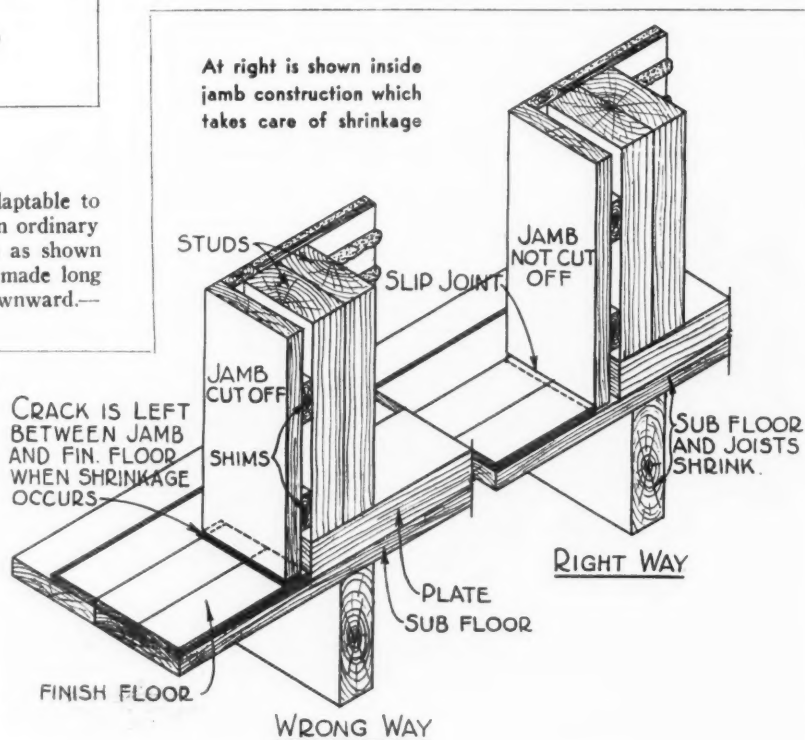
INSTEAD of going to a lot of work and making a big door jack, which at its best is hard to move around, I use the simple little jack shown above. Materials—1 pc. 1" x 4" x 24"; 2 pc. 2" x 4" x 24"; 2 pc. 2" x 4" x 8".

Use the long 2 x 4 pieces for bottom, next nail on the 1 x 4 piece, then nail or bolt the smaller pieces of 2 x 4 on top, space these at the thickness of door. The 1 x 4 must have a few saw cuts, in center of board, and about 3/8" deep. These cuts make 1 x 4 bend, holding door in position.—EDWARD EVERS, Carpenter, Englewood, Colo.

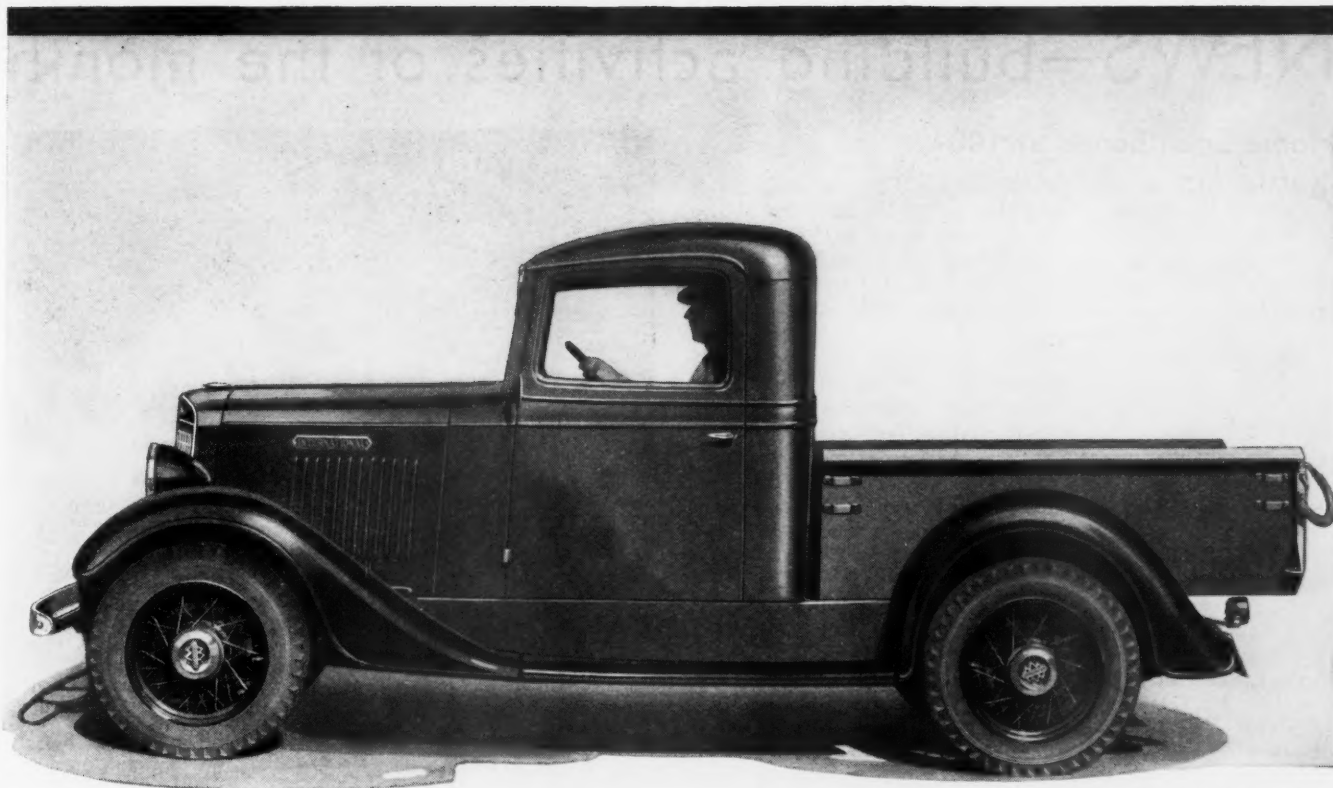
## Slip Joint for Inside Door Frame

FOR putting up inside door jambs, "wrong way" below shows the method commonly used. The jamb is cut off and the finish floor is shoved underneath it. When the sub-floor and joists shrink, there is a large gap left between the finish floor and the side jamb which is very noticeable.

"Right way" below shows the slip joint method I use. The jamb (and also the casing) is extended down to the sub-floor, and the finish floor is laid against it. Now, when the sub-floor and joists shrink, the finish floor just slips down and when they swell, it slips up.—JOE CATT, Contractor, Chatham, Ontario.



SECTION THRU INSIDE DOOR FRAME



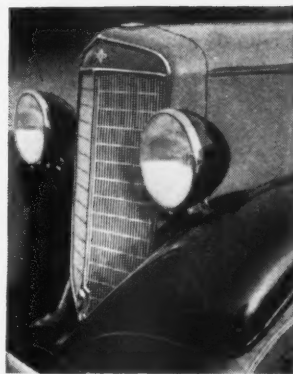
International Model C-1 Truck with all-steel pick-up body 66 in. long, 47½ in. wide. This truck is also available with canopy-top express, station-wagon, and panel bodies. The complete International Truck line ranges from ½-ton to 7½-ton capacities.

## INTERNATIONAL HARVESTER *Presents New ½-ton Truck*

**T**HIS new Half-Ton International, the Six-Cylinder Model C-1, is a truck of serviceable distinction and beauty, combining new qualities of utility, comfort, performance, and economy. You will find it an outstanding value in the low-price field.

The new Half-Ton International is a fast and sturdy unit that is *all truck*, with chassis and engine built for *truck* performance, like every International, and styled as you see it above. See and drive this latest product of International engineering, now on view at International Branch and Dealer showrooms.

INTERNATIONAL HARVESTER COMPANY  
606 S. Michigan Ave. OF AMERICA Chicago, Illinois  
(INCORPORATED)



### Half-Ton Model C-1 — Brief Specifications

**Rated Capacity:** ½-ton.

**Wheelbases:** 113 inches and 125 inches.

**Engine:** 6-cylinder, L-head type; bore, 3½ inches; stroke, 4½ inches. Maximum brake h. p., 78.5. Counterbalanced crankshaft. Removable-shell, precision-type main and connecting-rod bearings. Exhaust-valve seat inserts. Pressure lubrication. Down-draft carburetion. Air cleaner.

**Clutch:** 9-inch single-plate, with vibration damper.

**Transmission:** 3 speeds forward and 1 reverse.

**Universal Joints:** All-metal, roller-bearing type.

**Rear Axle:** Spiral-bevel. Chrome-molybdenum steel axle shafts.

**Steering Gear:** Irreversible cam-and-lever type.

**Brakes:** 4-wheel, mechanical, equal-action cam, 2-shoe type.

**Chassis Lubrication:** Hydraulic-type.

**Springs:** Semi-elliptic. All leaves of silico-manganese steel.

**Tires:** 5.25-18 (standard).

Standard Equipment includes spare wire wheel, fender well tire carrier, front and rear fenders, full-length running boards. Airplane-type instrument panel.

# INTERNATIONAL TRUCKS



# NEWS—building activities of the month

## Home Loan Bonds at 100 $\frac{3}{8}$

**A**SSURANCE of the passage of the Congressional bill to amend the Home Owners' Loan Act to guarantee HOLC bonds has sent quotations on these bonds up above 100. On April 25 they were being quoted in Chicago at 100 $\frac{3}{8}$ , which makes their exchange for mortgages so desirable that the work of the Home Loan Bank in taking distressed properties off the market has been greatly facilitated.

The benefit to the financing structure of the home building industry has been already apparent. A definite improvement in financing conditions has been reported in many sections, and numbers of building and loan institutions have been advertising loans for home building and repairs.

On April 16 the report of the Congressional Record showed conference committees of the House and the Senate in agreement on provisions of the House Bill S. 2999 guaranteeing the HOLC bonds. The Bill authorizes issuance of \$2,000,000,000 of the bonds to mature in 18 years to bear 4 per cent interest.

The Bill, as reported by the conference committee, eliminates the former requirements that mortgages must not be past due more than six months. It also states that no cash advance shall be made unless the applicant was in involuntary default on or before June 13, 1933.

(*LATE NEWS FLASH—Congress passed the bill on April 25 guaranteeing Home Loan Bonds and sent it to the President for signing. It was passed without the Norris amendment, which the President had endorsed, outlawing political appointments to HOLC.*)

## March Construction Shows Increase

**C**ONTRACTS let in March for new residences in the 37 states East of the Rockies, as tabulated by the F. W. Dodge Corp., amounted to \$28,098,000. This was almost twice the total of February, and 80 per cent above March of last year.

Contracts for construction of all description amounted to \$179,161,500, which is twice as great as February and three times as much as March 1933.

The U. S. Department of Labor report of building permits for 759 cities shows a total in March of \$35,236,160, as compared with \$28,480,588 in February. New residential building totaled \$8,854,322 in March this year as compared with \$4,969,432 in February.

## Co-operative Modern House

**A**N architect, a contractor, a lumberman, a realtor, several business men and an inventor are co-operating in Middletown, Ohio, to build an experimental modern house, using a new principle of construction.

The house is built in sections, flat on the ground. Corrugated steel sheets are used to which stucco and plaster is attached by a new asphaltic binder. When all sections have been built, they are up-ended, like raising a barn.

Taking part in the enterprise are the following (illustrated in the picture above, left to right): B. D. Morgan, contractor; Harold Goetz, architect; Mark Denny, lumberman; Hugh Wright, The American Rolling Mill Co.; R. F. Berryman, the inventor; Carl Williamson, building supply dealer; Bennett Chapple, The American Rolling Mill Co.; and C. G. Crist, real estate broker and subdivision owner.

## Home Builders Granted Code Stay

**A**STAY from the provisions of the construction code was granted to the land development and home building industries at the request of the National Association of Real Estate Boards in an order signed by General Hugh Johnson March 23.

The stay from terms of the construction code was asked pending consideration of a separate code for the land development and home building industry. The exemption does not cover wage, hour and labor provisions. The administration order reads:

WHEREAS, the Code of Fair Competition for the Construc-



**A CONTRACTOR, ARCHITECT, lumber dealer, realtor and business man of Middletown, Ohio, get together to plan an experimental house. Below is shown corrugated steel section to which stucco is applied by asphaltic binder.**



tion Industry, as approved by the President on January 31, 1934, effective March 2, 1934, appears to include, in its definition of the Industry, the business of the Land Development and Home Building Industry; and


WHEREAS, members of the Land Development and Home Building Industry have submitted for approval a Code of Fair Competition for their own Industry, which is now pending; and

WHEREAS, claim has been made within 10 days of the effective day of the Code of Fair Competition for the Construction Industry that the provisions thereof would be unjust to the members of the Land Development and Home Building Industry, and it appears that justice requires that a stay be granted of the application of the provisions of the Code of Fair Competition for the Construction Industry to members of said Land Development and Home Building Industry:

NOW, THEREFORE, I, Hugh S. Johnson, Administrator for Industrial Recovery, by authority in me vested by Executive Order, No. 6205-B, dated July 15, 1933, and otherwise, do hereby stay the application of the Code of Fair Competition of the Construction Industry so far as it applies to members of the Land Development and Home Building Industry, pending the approval of the Code of Fair Competition for said Land Development and Home Building Industry, provided, however, that during the period of such stay all of the members of the Land Development and Home Building Industry shall comply with the wage, hour, and general labor provisions contained in the Code of Fair Competition for the Construction Industry.

## EVERY LOAD COSTS LESS WITH A CHEVROLET OVERHEAD VALVE SIX

**...the lowest-priced Six  
you can buy, and it's  
all truck throughout**

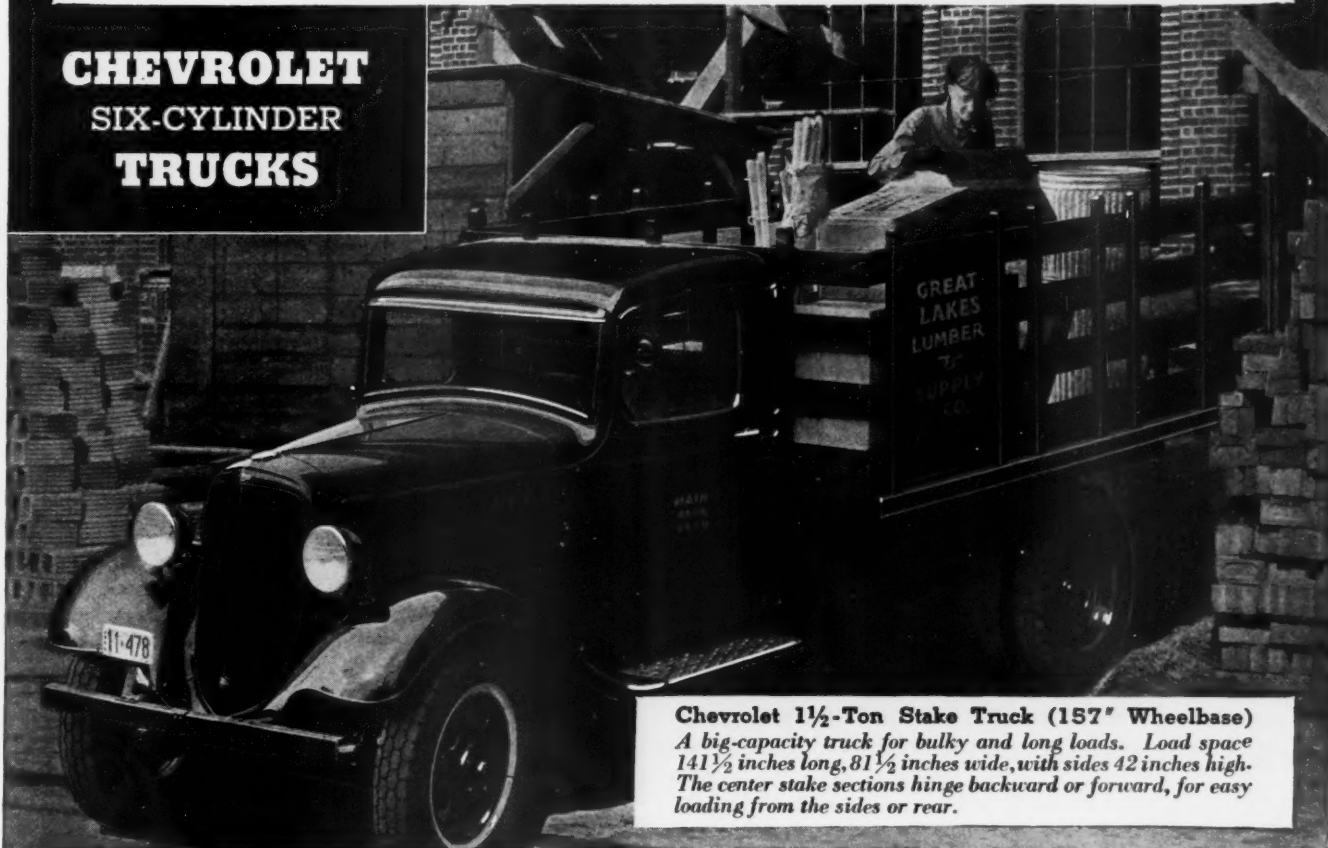
 For hauling building supplies at lower cost, take a Six every time—and if it's a Six with *overhead valves*, you'll save even more. For only an *overhead valve* engine can give you Blue-Flame combustion, with its greater economy on gas and oil and lower upkeep cost. And only a Six gives you smooth, steady power without needless extra cylinders

to maintain. The 1934 Chevrolet truck is a Six—and it also has *overhead valves*. Those two facts are all-important for economy. In addition, the Chevrolet truck is *all truck throughout*. You can load it to capacity and count on truck strength in every part—in the axles, springs, frame, transmission and brakes. Everything about the Chevrolet truck—big capacity, dependability, its economy on empty runs as well as under load—is bound to save you money on every load—and it's the *world's lowest-priced Six!*

CHEVROLET MOTOR CO., DETROIT, MICH.

*Compare Chevrolet's low delivered prices and easy G.M.A.C. terms. A General Motors Value*

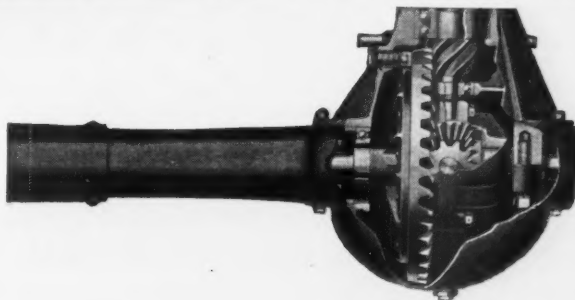
### CHEVROLET SIX-CYLINDER TRUCKS



**Chevrolet 1½-Ton Stake Truck (157" Wheelbase)**  
A big-capacity truck for bulky and long loads. Load space 141½ inches long, 81½ inches wide, with sides 42 inches high. The center stake sections hinge backward or forward, for easy loading from the sides or rear.

### HEAVY DUTY REAR AXLE

A liberal reserve of extra strength is built into the Chevrolet truck chassis for starting, pulling and stopping big loads. The rear axle, for example, has exceptionally large shafts, straddle-mounted pinion, double-row wheel bearings, 4-pinion differential, and the lowest final gear ratio (rear axle and transmission combined) of any 1½-ton truck.



# NEWS OF THE MONTH

(Continued from page 56)

## New Light Reflecting Material

**A** NEW light-reflecting material that provides an exceptionally bright, durable finish to aluminum and has a reflection factor of more than 80 per cent, was announced recently at a meeting of the Cleveland Chapter of the Illuminating Engineering Society.

The new material has been made possible through the development of the Alray process, an electrolytic brightening method discovered by Dr. R. B. Mason, of the research laboratories of the Aluminum Company of America. The General Electric Company assisted in the development through analysis and appraisal of the various types of finishes.

Through the new Alray process it is possible to produce bright white shiny specular surfaces having characteristics of sapphire



DR. R. B. MASON demonstrating high reflective quality of aluminum with new Alray finish.

or diffusing surfaces having a varying amount of frost-like appearance. High reflection factors well above 80 per cent have been proved to be easily procurable.

The new treating development makes it possible to get such a variety of finishes that the material will be applicable to practically all types of lighting equipment, such as for flood-lighting reflectors, spotlights, indirect store and office lighting fixtures, factory lighting reflectors, etc.

## Cities Report Building Work

**T**HE building industry is coming back, according to E. M. Craig, executive secretary of the National Association of Building Trades Employers and a member of the National Construction Code Authority. He made public on Apr. 22 a first quarterly building summary for 1934 as gathered from 75 cities. This shows that the building industry touched its low level of activity in 1933. The first quarter total of 1934 was \$500,000,000 as compared with a total of \$200,000,000 for the first 1933 quarter.

Building association executives of several leading cities of the 75 canvassed give the following encouraging reports:

**BALTIMORE**—Several millions in public work proceeding.

**BUFFALO**—First 1934 quarter an improvement over same 1933 period.

**CHICAGO**—First 1932 quarter, \$1,558,600; first 1933 quarter \$340,800; first 1934 quarter \$1,674,675; \$4,000,000 in additional World's Fair work not included in the 1934 quarter. Indications are that the first half of 1934 will exceed the 1933 yearly total of \$3,600,000. Practically all building trades agreements consum-

mated in 1929 expire May 31, 1934. Building trades demanding a six-hour day.

**CLEVELAND**—First 1933 quarter, \$762,848; first 1934 quarter \$973,825. Home shortage existing and apartment rental situation firming.

**DETROIT**—March, 1934 permits, \$484,599; March, 1933 permits, \$157,391. Increased rentals are imminent with activity in automotive factories. Apartment vacancies decreased 50 per cent during the last 6 months.

**DULUTH**—First 1934 quarter shows a 7 per cent improvement over same 1933 period. Home shortage apparent and apartment rental situation tightening up.

**KANSAS CITY**—1934 building volume will exceed 1932 and 1933 figures. First 1933 quarter, \$154,050 in comparison with \$350,800 for like 1934 period. Shortage of well conditioned homes and apartment buildings of three and four rooms. \$6,000,000 in public work proceeding.

**LOUISVILLE**—1934 quarter ahead of 1933. Home shortage and apartment rental situation firming.

**MINNEAPOLIS**—First 1933 quarter, \$240,285; first 1934 quarter, \$707,300. Home shortage and apartment rental situation firming.

**NEW YORK**—A \$200,000,000 building program of heavy construction, tunnels, bridges, sewers, etc., estimated for 1934. \$25,000,000 is now proceeding. Downward building wage adjustment essential before sustained building recovery sets in. March 1934 permits were 90.4 per cent over Feb. 1934 and 41 per cent greater than in March 1933.

**PHILADELPHIA**—1934 building outlook far more promising than 1932 and 1933. 1934 first quarter, \$2,373,610; first 1933 quarter, \$1,582,493. Necessary to stabilize building wages at reasonable levels.

**PORTLAND, ORE.**—First 1934 quarter showing a marked improvement over same 1932 and 1933 periods. \$21,000,000 in public work proceedings. No apartment buildings erected during the last 4 years and apartment rental situation greatly improved.

**ST. PAUL**—First 1934 quarter is a 60 per cent improvement over first 1933 quarter. Demand for single family homes.

Among the smaller cities Akron reports first 1933 quarter, \$57,342; first quarter of 1934, \$228,747 and shortage of homes. Sioux City says the 1934 building volume will double 1933 volume; Dallas reports \$1,500,000 in construction work going ahead and families undoubling. Des Moines says considerable private and public construction work to be done in 1934; Grand Rapids, better 1934 building outlook; Hammond, Ind., 1934 will be better than 1933. Peoria and its adjacent suburb Pekin have several millions in distillery work proceeding; Lincoln, Nebr., first 1934 quarter ahead of 1933. Houston and El Paso, Tex., facing an acute shortage of apartments and dwellings of all types due to a widespread undoubling of families.

Mr. Craig points out that this survey bears out the government report that the nationwide home shortage is not a myth and that an expenditure of \$14,000,000,000 is needed to overcome it.

Within the next sixty to ninety days Mr. Craig relates that about thirty to forty NRA building codes of fair competition will be in operation. Each specialized building unit levies a tax for code administration and this inescapable fixed charge will be included in all types of contractors' future estimates and building costs will slightly increase. Nine codes are now in operation.

## No Subcontract Shopping!

**T**O minimize the practice of "subcontract shopping" on the part of contractors after the opening of bids, an order was issued Apr. 9 by Public Administrator Harold L. Ickes requesting insertion of the following paragraph in all calls for bids and bid proposals on Public Works projects:

"Every contractor who bids upon a project financed in whole or in part by loans or grants from the PWA shall submit in a sealed envelope with his bid to the contracting authority the names of all subcontractors and their bids upon which his bid is based. The sealed envelope so submitted shall have on it the name of the contractor with the words thereon 'Bids of Subcontractors.' Such submission shall be deemed to constitute an acceptance by the contractor, if awarded the contract, of the bid of each subcontractor. Any alteration therein, after the award of the contract, shall be subject to the approval of the contracting officer of the Federal Department or Agency concerned."—(Signed) HAROLD L. ICKES.



## QUICK FACTS ABOUT THE NEW FORD V-8 TRUCK

### *New Features Add Even Greater Power, Economy, Reliability*

The New Ford V-8 Truck is a *real truck* in every detail. Every part is a real truck part, designed to stand up under severe punishment—131½-inch and 157-inch wheelbases.

**NEW Full Floating Rear Axle.** Axle housing carries entire weight of truck and load. Axle shaft is left free to transmit driving power from the engine and can be removed without jacking up the wheels. Entire rear end assembly greatly increased in strength.

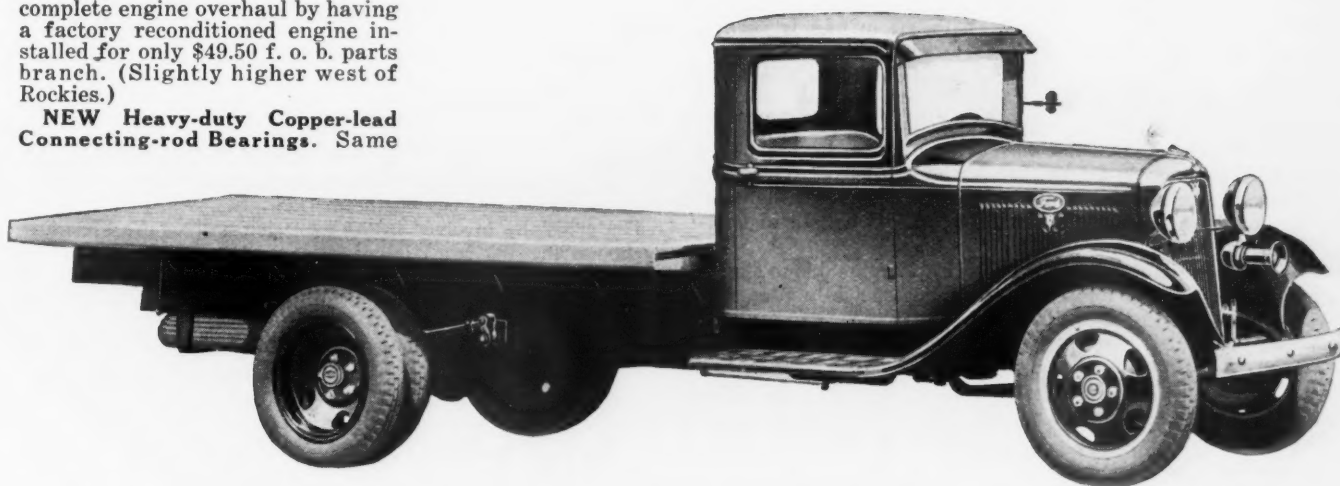
**Special Truck-type V-8 Engine.** Develops 80 horsepower. More power per gallon of fuel than any other Ford engine ever built. Takes same amount of gasoline used by 4-cylinder truck but divides it into eight parts, giving 8-cylinder performance with 4-cylinder economy.

**Exclusive Engine Exchange Policy.** After thousands of miles of service you can avoid the cost of a complete engine overhaul by having a factory reconditioned engine installed for only \$49.50 f. o. b. parts branch. (Slightly higher west of Rockies.)

**NEW Heavy-duty Copper-lead Connecting-rod Bearings.** Same

# Now Ready for Delivery

# NEW FORD V-8 TRUCK



type used by racing cars and airplane engines, which operate at wide-open throttle and high bearing pressures.

**NEW Economy and Reliability.** New dual carburetor with dual intake manifold increases gasoline mileage. New waterline thermostats maintain efficient operating temperatures. New truck-type cylinder heads give high horsepower with lower compression. New aluminum piston design and polished cylinder walls reduce oil consumption.

**Basic Ford Features Retained.** Famous torque-tube drive, heavy-duty clutch, trouble-free transmission, strong carbon steel frame with 7-inch side members, heavy carbon chrome "I" beam front axle and many other features of proved reliability are retained.

Operating costs can easily eat into profits of building contractors. That explains why builders are changing over to the New Ford V-8 Truck for all their hauling requirements. They have discovered that the smooth, powerful, always reliable V-8 engine speeds up hauling time and cuts operating costs to the very bone. They know that the big, husky chassis with its frame seven inches deep, and strong, widely spaced rear springs will stand up under the punishment of road and load. In every detail, the New Ford V-8 Truck is designed and built to stay ON the job and OUT of the repair shop. And it does!



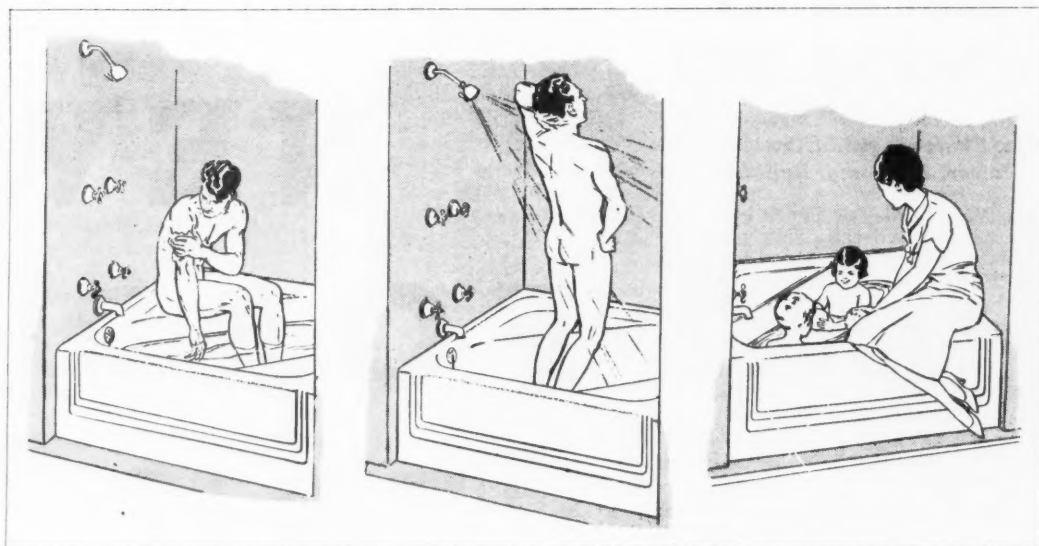
## FREE

Get this Book from  
Your Ford Dealer

**NOW ON DISPLAY AT FORD DEALERS**

## NEW PRODUCTS—Square type bathtub announced

**Tub, shower, seat, child's bath, all combined in one new, modern fixture that requires a minimum amount of space.**



THREE FEATURES OF THE NEW BATHTUB are illustrated above. Left—a dependable seat is provided making scrubbing of feet easier. Center—ample room for a standing shower. Right—bathing two children at a time is practical. Mother or nurse can sit while bathing the children, or seat can be used for handy shelf.

EVERY now and then a new product comes along that makes people wonder why that idea was not thought of long ago. The new square type bathtub which combines a tub bath, shower bath, seat bath and child bath all in one is such a product. One of the largest manufacturers of plumbing equipment has just announced this new addition to its line after study and research.

Bathing comfort is increased and safety assured by the new design. In brief, the change has been to place the tub at an angle of 45 degrees in a unit that is almost square. This provides two ample seats, one at the front, the other at the rear, for use of the bather. These seats provide a degree of comfort and convenience never before realized.

The tub is available in various colors and adaptable to standard plumbing fixtures and equipment, and especially adaptable for use in remodeling and modernizing of homes.

### Heavy Duty Asphalt Tile

A NEW heavy duty asphalt tile flooring for unusually severe service conditions has been announced by a leading manufacturer of building products. The outstanding characteristics of the material are its resistance to dents and abrasions, its great strength and its ability to withstand exposure to moisture.

Stores, schools, laundries, offices, public buildings, and car and bus floors are a few of the applications for this new type of flooring. It can also be applied directly over smooth wood

sub-floors and may be used for installations at or below grade.

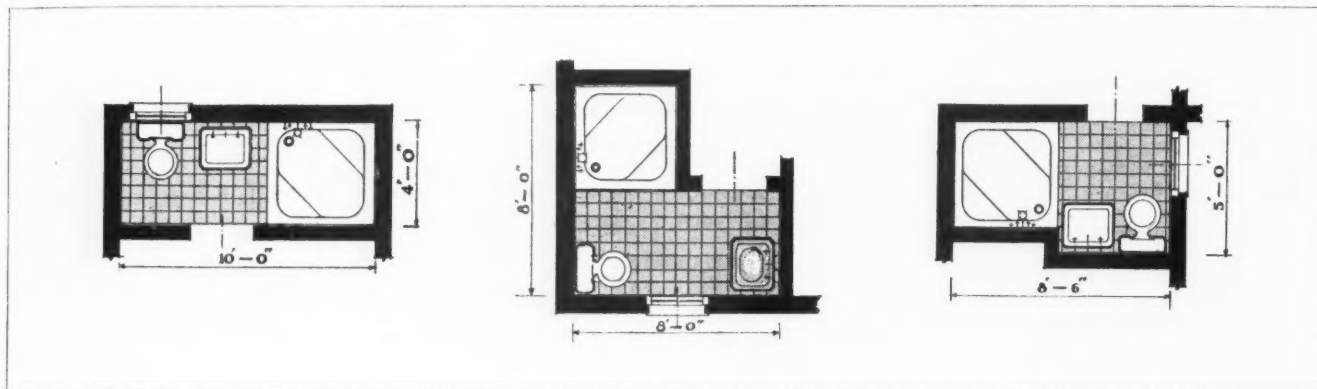
The heavy duty asphalt tile is made in four colors—black, red, mahogany and brown. Tiles are 9 by 9 inches, 9 by 10 inches, 12 by 12 inches, and 12 by 24 inches; thickness  $\frac{1}{4}$  inch. Full details available on request.

### New Process Aluminum Paint

A NEW type of aluminum paint made by a recently perfected process involving explosion of aluminum particles in a vacuum has been placed on the market.

The principles involved in the explosion process are illustrated by comparing the ready-mixed paint to batter. When flour is mixed with water, there is a tendency for particles of the flour to form little solid lumps, practically dry on the inside but wetted on the outside by the water. It is difficult to break up the smallest of these lumps by ordinary mixing methods. Aluminum bronze powder particles, like flour, tend to group together in clusters, having from 4 to 50 particles in a lump. By applying a high 31 inch vacuum to the paint, the air imprisoned within the lump is released with an explosive effect.

For this reason, there are more separate and individual particles of aluminum powder in ready mixed aluminum paint made by the vacuum process than are found in hand-mixed aluminum paint. Tests have proved that aluminum paint exploded by this vacuum process spreads easily and keeps a uniform brilliance because there are no lumps present to roughen the surface.



THE FOUR FOOT SQUARE BATHTUB IS A SPACESAVER, as is shown by these three typical floor plans. It can be fitted into many places where the oblong tub wastes space. It is especially adaptable for use in modernizing work, and can be installed with a minimum of effort.

# Why OVER-ROOFING

## —with RED CEDAR SHINGLES

*Always Builds  
New Customer Files!*



"I do want to thank you . . . I am just delighted . . . even my bridge party yesterday wasn't disturbed. Of course you told me that there would be no mess or litter over the lawn or shrubbery, but I had no idea . . ."

"If you will please tell anyone that asks about it, Mrs. Wells, and explain that every shingle on your house is just like this, and that we always keep these Certified Shingles in stock, will it be asking too much?"

"Why no, of course not! You know, I am so pleased . . . it even rained hard when the over-roofing was being done, but not a drop came through into the attic. I know, because I looked. I was worried at first."

"There are two things more, Mrs. Wells, that I am sure will interest you. When the first hot day comes along you'll realize how much cooler the house is. Because you have two roofs now—real insulation that will keep the heat from the sun out! And next winter you'll save a lot each month in fuel. It will make that bill you just paid look even smaller."

"Mr. Johnson, here, our carpenter, has been telling me how he followed your suggestions, too. You know, we women have to depend upon the best advice we can get and I know that these shingles that you sell have to really last like you say they will. There is one thing that bothers me just a teeney little bit—now that we have our roof that will be good for twenty-five or thirty years or even fifty years, what will Mr. Johnson and his men do? I mean, won't it really mean less work, eventually, for them?"

"Don't worry about us, Mrs. Wells. There are lots of roofs, and please tell anybody that asks that I

used hot-dipped, zinc-coated nails . . . good-sized box nails . . . that will last as long as the roof, and that's a long, long time. I followed those instructions that you gave me, precisely—the ones that came from the Red Cedar Shingle Bureau. They ought to know, too, because their business depends upon how good these roofs are. So I always do it right . . . and I believe that all of the better contractors are careful too; but remember me, will you, Mrs. Wells?"

"I certainly will, Mr. Johnson. You can depend upon that. And now I think that I will call up Mrs. Andrews and invite her over, I just want her to see . . ."

And so everybody was happy . . . the lumber dealer who stocked Red Cedar Shingles bearing the Certified Label of the Red Cedar Shingle Bureau, with the literature that helped bring profitable business on a sound, substantial basis . . . the contractor, who had the satisfaction of doing a good job that mightily pleased his customer and that brought prompt pay that enthusiastic approval inspired . . . and the customer, who had a better, finer roof that improved the appearance of her property, that brought greater security and that increased her delight in living—a more permanently beautiful home.

As a builder, contractor, dealer or architect, you should know all about the "over-roofing" method of applying Red Cedar Shingles. Fill out the coupon below for an interesting and well illustrated folder. There is no obligation on your part whatsoever.



*This Red Cedar Shingle Bureau  
Certified Label is the mark of a  
guaranteed, inspected standard  
product.*

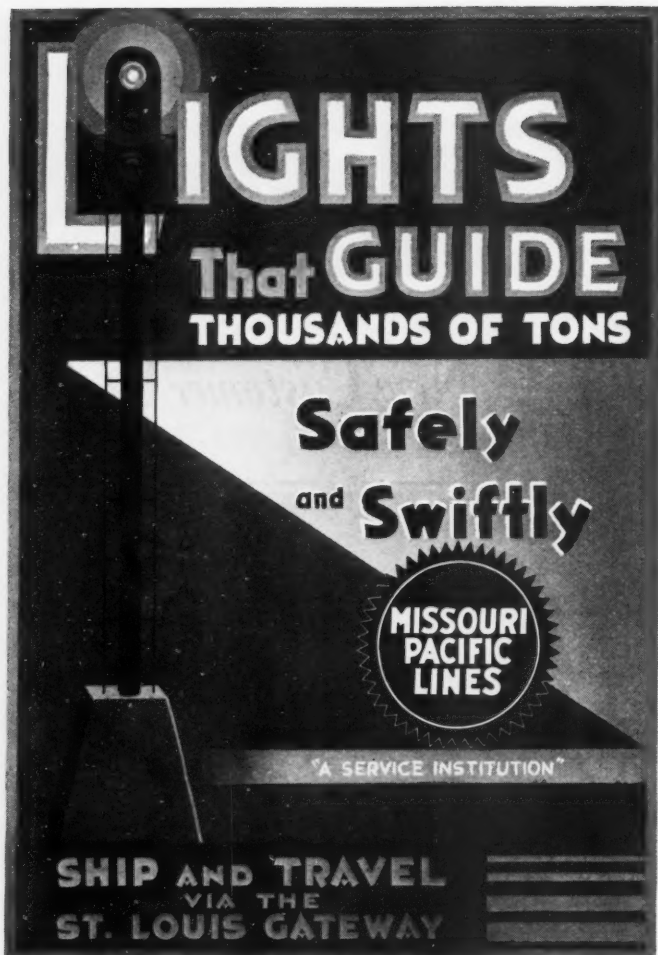
RED CEDAR SHINGLE BUREAU  
4455 Stuart Building, Seattle, Washington

I would be interested in receiving copy of your "Over-roofing" literature to be sent me without cost or obligation to myself.

707

NAME \_\_\_\_\_  
ADDRESS \_\_\_\_\_





**LIGHTS**  
That **GUIDE**  
THOUSANDS OF TONS

**Safely**  
and **Swiftly**

**MISSOURI  
PACIFIC  
LINES**

"A SERVICE INSTITUTION"

**SHIP AND TRAVEL**  
VIA THE  
**ST. LOUIS GATEWAY**

## Startling New $\frac{3}{8}$ yard performance

**Full Revolving**  
**Weights 7½ to 8 tons**  
**Travels 4¼ miles per hour**  
**Steers like a tractor**  
**Power 35 to 52 H.P.**  
**Swings 5 R. P. M.**  
**Hooked Conical Rollers**  
(no center pintle)  
**Ball and Roller Bearings**  
**Automatic Lubrication**  
**Balanced Value**



**BUCYRUS  
ERIE**

**10-B**

Shovel — Dragline —  
Clamshell — Crane —  
Dragshovel — Backfiller  
— Piledriver Skimmer.

Write for Bulletin

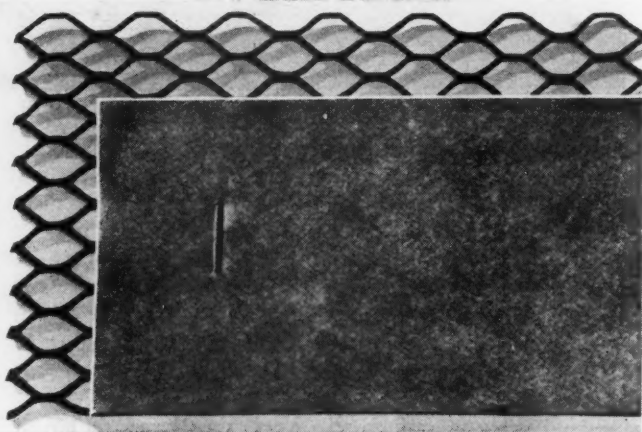
**Bucyrus-Erie Company**

Dept. 746AB South Milwaukee, Wisconsin

## For Ceilings and Partitions

**S**IMPLIFIED construction is the trend today. And perhaps no part of building has been more studied and simplified than ceiling and partition construction. It must offer not only a base for plaster, but also heat and sound insulation as well.

A new product that meets these specifications has just been placed on the market, which consists of a metal lath with a kraft board backing. This board backing is attached to the metal lath with a special metal clip. There is enough spring in the board, between fastening, to permit a free flow of mortar on the back side of the lath with the kraft board as a form, thus producing a reinforced slab of plaster giving the strongest type of construction. The metal lath is thoroughly embedded in the plaster. The effect of back plastering is obtained. Corrosion under exposed conditions is prevented. The product provides structural strength as well as a sound retardant insulation and a perfected plaster base. It may be used, for suspended ceilings, laced to channel irons; for nailing to wooden studs in ceiling or partition construction; for sheathing in stucco work.



Metal lath with kraft backing provides strong partition and ceiling construction

## Striped Effect for Awnings

**E**CONOMICAL production of woven stripe effects on awning cloth has been made possible by the development of a new painting process which repeats the stripe on both sides of the fabric. The new process offers an unlimited selection of color combinations with the added appeal of woven stripe appearance at a small cost per yard above the price of cloth painted on one side only. The material costs approximately 35 per cent less than woven stripe cloth.

Improved color fastness has been obtained by the new process. Fadeometer tests approximating sunlight and water tests simulating exposure to rain conducted continuously for 570 hours demonstrated the permanence of the color painting.

## Inverted Bucket Type Trap

**A** NEW inverted bucket steam trap has been perfected for installation on all classes of hospital and kitchen equipment or any similar service where considerable volume of condensate is to be handled. This trap is self venting which feature, combined with the large water capacity, permits high efficiency of the apparatus upon which it is installed.

The trap is very simple in construction and operation. The motive element is an inverted seamless open bucket operating through a cast brass lever arm to open and close the swivel valve pin.

The trap discharges intermittently. Between cycles of operation, the float is in the raised position being filled with steam and air and the valve pin is closed against the seat. As condensate rises in the trap body, the weight of the water forces the steam and air out through the vent opening in the top of the float, filling float with water which causes it to drop. When the condensate has drained from the trap, it fills with steam causing the float to rise once more and the valve to close.

## Twelve-in-One Tool

A NEW handy tool six inches long and weighing along 3 ounces has a wide range of uses for carpenters and builders. It has 12 principal uses and others are coming out constantly. It is low cost, made of nickle silver. Some of its uses include:

**TRI-SQUARE.** Allow the upper blade to seat at the rounded end of the lower blade. Use either the squared or rounded end of the upper blade.

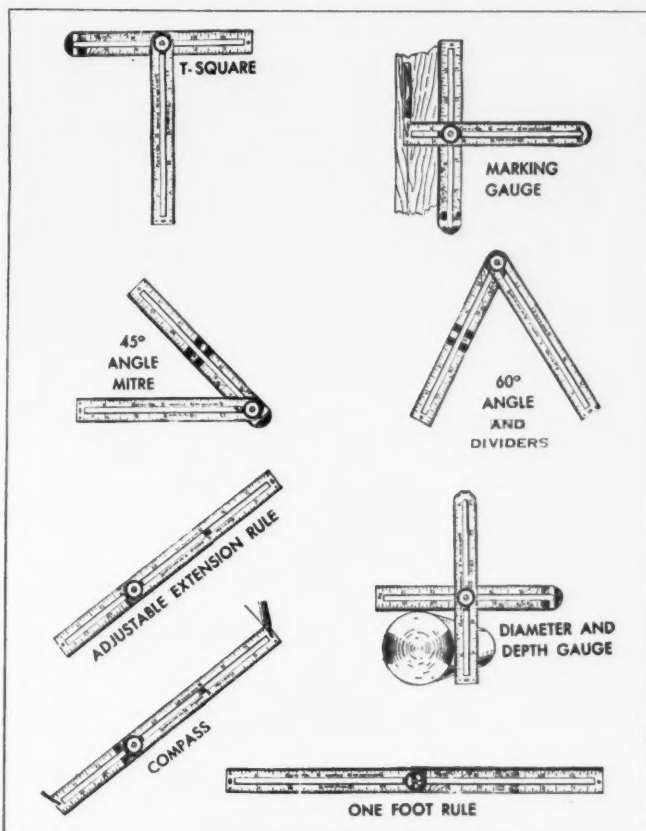
**DEPTH and DIAMETER GAUGE.** Set the blades as in the marking gauge, using the upper blade for measuring.

**30, 45 and 60 DEGREE ANGLES, CALIPERS AND DIVIDERS.** These angles are graduated accurately on the lower blade. Split the lines with the edge of upper blade, tighten nut.

**PROTRACTOR.** The rounded end of the upper blade is graduated at 15 degree intervals. Set the desired angle to correspond with the mark on the edge of the lower blade.

**COMPASS.** Set the blades as shown in the illustration, using a pencil or point in the diamond-shaped hole, with another point in either hole at the end of the lower blade or through the hole in the knurled nut.

**BEVEL.** Align the blades as in the illustration to determine bevels. Other uses include T-square, marking gauge, inside measure, adjustable extension rule.



Illustrating eight of the many uses for new vest pocket tool for carpenters and builders.

## Adhesive Wood Putty

A NEW wood putty which does not shrink, sticks like glue, and hardens into wood has been put on the market by a Midwestern firm.

The wood putty does not contain celluloid or other nitro-cellulose products as are contained in ordinary plastic filling materials. Instead, it is made from real wood and a new synthetic resin, which has demonstrated its value as an outstanding plastic substance developed by modern chemical research.

Although this new material is not sold as an adhesive, it sticks to wood so securely that it may be classed as such. When inlays or repairs are made with this material, they can be planed. Shavings which contain both natural wood and the hardened wood putty hold together as if they were one piece.

Any tone or pastel shade may be produced in a few seconds.

## THREE FACTS MAKE RO-WAY OVERHEAD DOORS Easier To Sell!

### —More Profitable, too

#### 1 NOT HIGH PRICED.

When you quote Ro-Way prices, you immediately correct the old-time impression that overhead type doors cost about double what they actually do. Few owners will deny themselves the greater convenience, economy and longer service that Ro-Way Overhead Doors give, when you point out the slight difference in cost over swinging or sliding doors.

#### 2 FEWER ALTERATIONS REQUIRED.

That means real economy for both owner and contractor. Ro-Way Overhead Doors require no alterations in most old buildings, and are available in all sizes and to fit all door openings.

#### 3 SEAL TITE MOLDING.

An exclusive Ro-Way Feature. A simple, gravity-operated Cam (Fig. B) instantly frees the lower section of the Ro-Way Door in opening, and just as effectively seals the door draft-tight on closing. No other overhead type of door has this valuable feature which eliminates 90 per cent of the usual amount of friction.

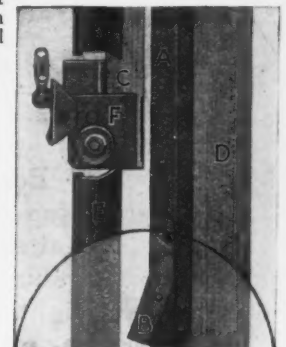
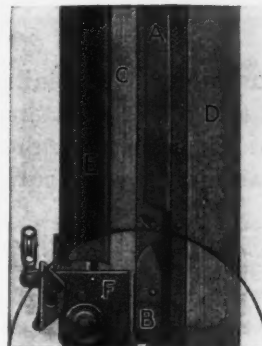
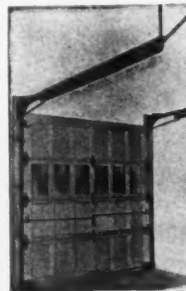


Illustration above shows door opening without a particle of drag, and at left, the perfect "Seal Tite" closing is shown.

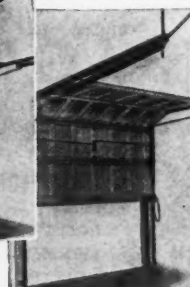
## RO-WAY Overhead Doors

### —for commercial and residential use

—are made in sixteen different types, with headroom requirements of 8½ to 21 inches. All Standard Sizes, as well as Special Sizes and heavy duty doors with special heavy tracking are available. Ask especially about the Ro-Way low priced Doors for residence garages, and the Ro-Way specially designed torsion spring high lift Doors for use in public service stations.



Closed



Partly Open



Fully Open

[ Perfectly balanced in any position ]

Write for complete Catalog-Folder

See for yourself why Ro-Way Overhead Doors are "easier to sell and more profitable, too."

**Rowe Manufacturing Co.** 710 Holton St. Galesburg, Ill., U. S. A.



**MORE**  
Sunlight  
**BUT NO**  
*Extra Cost...*

● Because Lustraglass transmits more daylight and also a substantial amount of the shorter (more valuable) ultra-violet rays of sunlight...

Because it is the whitest of all window glass...

Because it has a more brilliant lustre and clearer transparency...

Because, with all these advantages, it costs no more than ordinary window glass.

Whether you buy, sell or specify Lustraglass, you will be assured the utmost in service and value.

Lustraglass Folder 3320 is yours for the asking. Write for it.

**USTRAGLASS**

*the ultra violet ray window glass*

*The*  
**WHITEST**  
*of all*  
**WINDOW**  
**GLASS**

**AMERICAN WINDOW  
GLASS COMPANY**

FARMERS BANK BLDG.,  
PITTSBURGH, PENNA.

Also makers of Lustrawhite  
Picture Glass, Plexite Safety  
Glass,  $\frac{3}{16}$ " and  $\frac{1}{32}$ " Crystal  
Sheet, Bulb Edge Glass,  
Ground and Chipped Glass.

## LETTERS from READERS

### BUILDER CODE PUZZLES

"I would like to see in the AMERICAN BUILDER articles dealing with the Construction Code in its relations to the small contractor whose business is largely the building of cottages or two or three family dwellings together with the jobbing which is necessary to the maintenance of these houses. Here, locally, the rate for carpenters paid by the CWA has been \$1.20 per hour, with rate per hour of 60 cents paid by contractors (which is of course too low) and little, if any, work at that price. Other mechanics are in pretty much the same condition. If wages are boosted up to the CWA standard there will be nothing doing; for that would stifle all but compulsory repair work, with no new work done at all." Charles Bradbury, Carpenter and Builder, Fall River, Mass.

### HOUSES FOR CHAIN STORE FOLKS

"Here's a suggestion to stimulate the construction industry: Sell the larger chain store organizations operating throughout our nation the idea of building rental homes for certain of their key men who are continually being shifted from one town or territory to another. Floor space, windows and doors, etc., could be planned whereby the same size draperies, curtains, rugs, etc., could be used in all their homes. The employees would always be assured of housing accommodations in a desirable neighborhood, convenient for schools, churches, etc. This would be conducive to more contented employees. Should this plan be adopted by a large majority of chain stores a great many new homes would be built! Under such a plan the employer's investment would be sound and self liquidating." C. A. Roach, Realtor, Huntington, W. Va.

### TOUGH COMPETITION

"Cut-throat competition and uncertain wage scales make our work not only hard to obtain but ruin profit for all concerned. Today every carpenter, mason and even laborers attempt to take jobs and work for small earnings. Locally such tradesmen who are out of work compete with us contractors in small alteration and repair work; contractors who hire only scabs to do their work is the type of competition we get besides that from the other local contractors who number about twenty in all. The wage scale for masons is supposed to be \$9.20 per day but they go to work for as low as \$5.00 a day. If a contractor has a large job they are willing to work for a small wage but on small jobs they demand their union wage. How is a reputable firm to carry on under such unfavorable conditions (which are all due to lack of work caused by financial difficulties). Lack of work has made unions weak and at times helpless in the above cases." John A. Leo, Vice President, Tony Leo & Co., General Contractors, Poughkeepsie, N. Y.

### "KNOCK OUT" SAYS NATIONAL PRESIDENT

"Your February issue supporting the efforts of the National Retail Lumber Dealers Association to get mortgage money was a 'knock out.' As President of the National I feel I am voicing the sentiments of every retailer in the United States and also of the chairman of the committee having this in charge, Mr. L. P. Lewin, that we appreciate your wonderful efforts. I am sure something good has got to come out of all this hard work. I have received some very good news this morning from Washington and I am greatly encouraged. I feel this letter of appreciation is due your magazine and for that reason I am writing same." Spencer D. Baldwin, President, National Retail Lumber Dealers Assn., Jersey City, N. J.

### FROM SECRETARY BRYAN

"There is a wonderful field for new homes and the improvement of old ones throughout the country. There may not be a great shortage of houses but there is such a large proportion of



them not up to date—old back numbers—that modernization and improvements are a real necessity. We can use a good many new homes. All we need is a loosening of finance so that ordinary folks can borrow money to be used in construction." J. F. Bryan, Secy., Illinois Lumber and Material Dealers Assn., Springfield, Ill.

#### DOORS TO ENGLAND

"I have been wondering when the time will come that our government will do something of a concrete character to put men to work in rectifying and bettering the general housing conditions of a large percentage of our people. Our door industry on the Pacific Coast has had very little domestic business for some time past, and had it not been for the general housing program and building program in England at this time, our industry would not have been able to exist. It seems almost unbelievable that a small country the size of England should have consumed a much larger quantity of Douglas Fir doors during the past two years than we have consumed in our entire 48 states." G. A. Williams, Peterman Manufacturing Co., Tacoma, Wash.

#### THANK YOU!

"Thanks for the copy of your press release 'Better Homes—Better Business' which we are passing on to the editors of our town and county papers. You are certainly putting on a grand fight for Federal action toward an adequate program. It begins to look as though something might happen along this line. I am sure the lumber industry and other producers of building materials will recognize and appreciate your effective service to this end." W. B. Laughead, Advertising Manager, The Red River Lumber Co., Westwood, Calif.

#### ENDORSES BETTER HOME MOVEMENT

"Your program has my hearty approval. Nothing will do more to bring about a revival of general business than a program for building and rehabilitating homes throughout the country. I shall be glad to aid you in every way possible." Senator Arthur Capper, Washington, D. C.

### Current Home Building

(Continued from page 22)

which eliminated wood trim, and left merely a narrow concave strip of metal at the edge of the door. The trimless interiors give a clean, modern effect, and one of the important advantages pointed out is the elimination of the need of dusting and cleaning the trim.

Through Iowa and Southern Illinois, a considerable amount of farm construction has been getting started. This is especially true in Iowa where corn and hog money has done some good. Several new farm houses were noted, and frequent loads of farm-bound lumber and building materials were seen. One lumber dealer operating a large number of small yards in rural Iowa towns reported a 30 per cent pick-up in sales. In some other yards, as high as a 50 per cent increase has occurred.

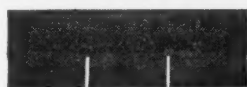
Outside of Ottawa, Ill., Contractor Frank Thiers, "builder of fine residences" was erecting the walls for a new farm house to be a complete, modern farm home with electric power plant and pressure water system, using an 80-gallon tank. The light and water system functions as one unit, compact and inexpensive.

Frank Thiers maintains a complete workshop in Ottawa in which he does a large part of the cutting and trimming. In the winter, he keeps his equipment busy making lumber specialties. He is another long time AMERICAN BUILDER reader.

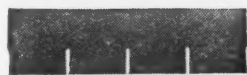
Modernizing, roofing and repairs are an important part of the market this spring. A lumber dealer at Rockford reported twelve re-roofing jobs in the past two weeks. Numerous alteration and improvement jobs are under way, both in the towns and on the farms of Iowa and Illinois. The bulk of this work is being done by carpenter-builders working out of retail lumber yards. Several interesting jobs were photographed, including a new foundation on a six-room bungalow, and the addition of a porch and siding; addition of an extra room on the front porch to a house, giving it a new and modern appearance; building of new steps and porches; replacement of siding and roofing, repainting and minor repairs.

## There's a Flintkote Shingle FOR EVERY MODERNIZATION

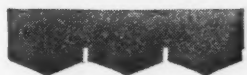
# JOB



← THICK BUTTS-----



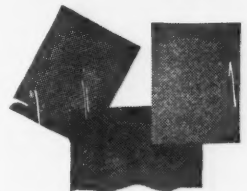
← SQUARE BUTTS-----



← SPECIAL DESIGNS-----



← HEXAGON STRIPS-----



← INDIVIDUAL SHINGLES-----

■ Re-roofing is a big item in today's modernization work. And no matter what type of asphalt shingle is wanted you can fill the order from the Flintkote line.

That means more jobs—more satisfactory jobs!

Is the order for hexagon strips—square butts—thick butts—special design strips or individual shingles? Flintkote makes them all! They come in as many as 27 beautiful colors, to please every home owner's taste. And they're priced for today's market.

### Siding, too...

**FLINTKOTE** Brick Siding further widens your modernization opportunities. It has everything home owners want—exceptional beauty, unusual durability and reasonable price.

All of these Flintkote products are made to the highest standards by controlled manufacturing processes and selected

raw materials. They are made by the company which has pioneered all important asphalt-shingle improvements.

For complete information and samples, write The Flintkote Company, 50 W. 50th St., New York. Branches in principal cities. Factories and Warehouses from Coast to Coast.



# FLINTKOTE

Wide Variety . . . True Economy



## Its Value is Gone but the Mortgage Lingers On . . . .

From a million firesides—more or less—rises the plaint of disgusted home owners: victims of an era of jerry building and boom financing.

"Never again," they vow, "never again will we build cheaply or shoddily. Give us honest construction, real values. Give us homes that will be staunch and livable long after the mortgage has been retired. Give us homes that don't pauperize a man for upkeep."

Get ready, today, to meet this plea. Ready with concrete for floors and walls to make homes last longer and show their age less . . . to make homes safe from fire, proof against weather.

Find out, for yourself, the ways you can use concrete to meet modern demands for quality and economy. The coupon will bring our new booklet on "How to Build

the Concrete Home." It's full of timely facts for builders.



### Concrete builds it better . . . and better looking

A home in Omaha, built by typical home buyers. Concrete throughout gives this home the permanence and value that people are looking for today.



## PORTLAND CEMENT ASSOCIATION

ROOM 155—33 WEST GRAND AVENUE, CHICAGO, ILL.

PORTLAND CEMENT ASSOCIATION, Room 155—33 W. Grand Ave., Chicago

Yes sir, I'm interested in seeing how concrete can help me cash in on the new demand for better homes. Send your booklet on how to build 'em of concrete.

Signed \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_

## How to Advertise Profitably

(Continued from page 25)

It may be objected by some that the response was very small for mailing of two or three hundred letters, but such criticism surely loses sight of the fact that the chance of interesting a hotel that is just ripe for this sort of approach and involving an expenditure which certainly would run into thousands of dollars, is considerably less than it would be if one were advertising glass wear for example. It would be a poor return for a mail-order house selling, let us say, midget radio sets for \$9.75, regular price \$15. But selling building service is another proposition entirely.

Persistency in advertising is a rare virtue, but the construction firm that used this letter did not allow the good intent to cool. They send a second letter to the same list, two weeks later. This is No. 2 above.

Lest it should be thought I have selected the only field in which favorable returns could be expected, here is a letter which was mailed to a small list of real estate agents and building managers on February 19, 1934. With this letter a stamped reply postal card was enclosed. (See letter No. 3 above.)

On February 20 four telephone calls from real estate firms were received by the building construction firm sending out the letter, requesting its representative to call at once to estimate, or confer with the agent in regard to building alterations. On February 21, four of the return postal cards were received intimating that the signatories would be interested in talking with the building firm's representative. Eight live prospects within two days after mailing the letter!

Again there were bites, confirming the opinion of the advertiser and his advertising consultant, that here was a fruitful field in which to sow the seed of reliable construction service . . . if one may be allowed to change the metaphor.

These illustrations are given for the purpose of demonstrating a principle, or several principles, for successful building construction advertising: First, select your field . . . the most promising field at the moment. That will depend not only on economic and business factors, but on your own special field of construction, if you have one. Second, work that field intensively until you have exhausted every argument and eliminated all but live prospects from your list. They may not be immediate prospects, but you should get sufficient reaction to indicate who is worth cultivating and keeping on your mailing list. Third, be specific in your sales talk, both in regard to your prospect's business and in regard to your own work and accomplishments in his particular field.

If your specialty is school buildings, your advertising should be addressed to school committees and to architects who are handling, or have handled, a volume of school projects. A New England firm of building contractors, for example, has erected a number of churches. In the advertising campaign which this firm will run shortly, letters and display advertising will be addressed to building committees of churches, and to church architects.

To most readers of this article there will be nothing unfamiliar in the idea that the building contractor can *create* new business. He has always been the best salesman. It was the construction industry that sold the idea of winter construction in northern states and in Canada. Today somebody has got to sell the idea of building, NOW, to stir people who are thinking of building later—"when things are more settled." Campaigns for remodeling and modernization have been initiated by lumber building supply interests, and have been in a measure successful. The building industry is now in need of new and progressive ideas. Why not this one . . . the idea of creating new business instead of waiting for it to develop along recognized lines?

Is the building contractor justified in spending money in space advertising in newspapers and magazines? Only in so far as he has something specific to say which would be of real interest to the readers of the media selected to carry the advertising message. A builder of homes, for example, can use the real estate pages of newspapers with profit, if he spends enough money to use cuts of attractive homes he has erected. And he should not forget that he will create goodwill on the part of the architect if he advertises the architect who was employed to prepare the plans. Incidentally, this raises another question: Does it pay to advertise to the architects?



Although the great majority of building contracts are not originated by architects, the goodwill of the architectural field is valuable to the successful building contractor. This can be achieved by regular mailings to a selected list of architects within the field of operations covered by the contractor. Where regional architectural publications exist, as in New England, for example, the builder can use the advertising pages of these magazines with reasonable assurance that his message, if sufficiently impressive, will be seen and read by the local architectural field.

A valuable source of contact for the builder is the F. W. Dodge Construction report service, and the contractor who fails to make the fullest use of these reports is missing a fruitful source of business. Even should he fail to secure a contract after the usual contact with the architect, owner, or agent responsible for awarding the contract, the Dodge reports can still be used as a source of prospective or possible future construction projects.

Resultful advertising need not, and should not, be expensive to the average building contractor; and each step in the advertising campaign should be in the nature of a test. If the test advertising produces returns then it should be developed to the limit of the financial ability of the contractor.

## "Cost-Key" Estimating

(Continued from page 53)

apparent after the definite example is given.

Suppose that I have carefully figured a cost of \$2,000.00 for the Basic House and that another house, figured on the same basis, costs \$3,000.00. By simply dividing \$3,000.00 by my basic \$2,000.00 gives 1.500 as the cost-rate. In other words, this other house costs 1.500 times as much, or 50 per cent more than my Basic House.

"How do you determine or establish the cost-rate?" is a question frequently asked. Answering this question seems to answer all questions; so it is given as follows:

This cost-rate is a constant factor—the same everywhere. The variable factor is the cost of the Basic House, which varies everywhere according to the construction, materials, prices, wage scale and other "local factors" which are involved by figuring the Basic House. That this cost-rate is practically constant has been proved hundreds of times in the past seven years by actual results everywhere as well as by a test that I will explain in a subsequent article.

### Foundation Walls

The second figure, 157, always gives the linear feet of foundation required. This is based on outside dimensions exclusive of open porches. This allows the doubling of four corners to provide for footings of girder posts, porches and stoops. If cross walls or partitions are wanted they must be added to the linear feet given or figured separately. If a plan shows an attached garage on the same level as the first floor, foundation walls are thus provided on outside walls only of like depth as you figure for the main house. If a full basement is wanted, this will usually provide for the necessary foundation for this attached garage since its foundation is usually only about half as high as the basement wall, or only sufficient to extend below the frost line. Multiplying the linear feet of foundation given by your price per linear foot will give your cost of the foundation walls. These must be of separate consideration, and never included with the Basic House, because of the variation due to building site and individual choice everywhere and the variation in the frost line in various parts of the country.

### Floor Area or Basement Floor

The third figure, 1470, gives the square feet exclusive of open porches and attached garages, based on outside dimensions. The net floor area on the inside of the foundation walls will be as much less as the linear feet of wall (157) multiplied by the thickness in feet, thus: If 12" thick, deduct as many square feet as there are linear feet of wall. If 8" thick, deduct two-thirds of linear feet, etc. In all probability you will find that you can figure basement floors on the basis of outside dimensions and let

(Continued to page 68)



**no REPLACEMENT  
COSTS in thirty  
years**

An average service of 30 years has been established by test for Samson Spot Cord.

More than forty years of actual use substantiates these tests.

Samson Spot Cord is specified by architects because such specification is definite and positive—Spot Cord is made in one grade only and is identified by the trade mark, the colored spots. Substitution is easily detected and is unnecessary because Samson Spot Cord is available to contractors and builders through Hardware and Supply dealers in every section of the United States.

**SAMSON CORDAGE WORKS**  
89 Broad St. Boston, Mass.



**ONE GRADE**  
*Positive identification*

Made of extra quality fine three ply yarn, and guaranteed free from imperfections. Firmly braided, smoothly finished. Six standard sizes.

If you haven't a Spot Cord specification folder in your files write for copy. It gives complete data, comparative tests, etc.



**BRICK- CONTROL THE MARKET WITH THIS AUTOMATIC MACHINE**

**20% Lighter Savings In Construction** **Make Both Face and Common at 40% Less**

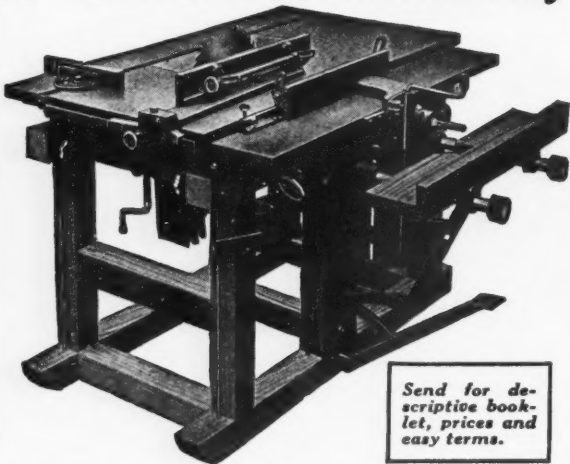


**A REVOLUTIONARY PROCESS IN BRICK MAKING**  
A COMMON BRICK that meets today's new conditions for lighter weight, lower cost, high quality, and new advanced types of construction.  
A FACE BRICK in more than 40 rich, permanent colors and textures, answering today's demand for new color harmony at unbelievably low costs.  
AUTOMATIC LINE PRODUCTION at the rate of 3,000 units per hour with a low cost, self-contained, semi-portable machine.  
THESE THREE OUTSTANDING ADVANTAGES are your assurance of the exceptional possibilities in a great new market in your territory—All protected by exclusive franchise.  
T. W. BELK, A SOUTH CAROLINA CONTRACTOR, installed his machine four months ago. People were skeptical. Today operating at capacity he is still more than four hundred thousand brick behind on his orders. Other products manufacturers in Washington, Dakota, Kansas, Texas, Michigan and the East report exceptional results and furnish definite proof of the merit of the new DUNBRIK Machine and Process.  
Send for the booklet "4 Keys to Success" with definite proof and complete manufacturing data. No obligation.

**ROOF TILE MACHINE**  
Operates the same as DUNBRIK machine—Automatic Line Production. Capacity a roof a day. Low cost. Open up another profitable market.  
**40 COLORS AND SHADES**  
DUNTEX the most beautiful roof material. Offers big possibilities for the progressive contractor. Write for booklet R-4. It tells the whole story.

**W. E. DUNN MFG. CO., 450 W. 23rd St., Holland, Mich.**

## There's No Economy in Worn-Out—Out of Date Machinery



Send for descriptive booklet, prices and easy terms.

Modernize your equipment with Monarch machines on our present low price, easy term plan, an opportunity that may never come again.

Install a Monarch Variety Woodworker and enjoy the efficiency of this four-in-one machine—cut off and rip saw with boring attachment, mortiser and jointer.

Other big time and money-saving machines include jointers, band saws, lathes, and the marvelous 20th Century Woodworker.

**AMERICAN SAW MILL MACHINERY CO.**  
60 Main Street Hackettstown, N. J.

## "Cost-Key" Estimating

(Continued from page 67)

the gain of floor saved by the walls cancel the cost of the basement sash required.

In view of the fact that since picture plans (picture and floor plans) seldom show the basement plan, the number of basement sash can be varied on the basis of one for as many feet of wall as the gain of floor will provide. To illustrate, if your basement sash costs \$3.00 more than the masonry which it saves, and basement floor is 15c per square foot, it will require 20 square feet of floor to cancel the cost of each sash. If the wall is 12" thick, this will mean 20 linear feet; if 8" thick, one sash will be provided per 30 linear feet of foundation wall. Thus you can stipulate the number which you will include. If you wish, you can have your unit price per basement sash and figure separately. In all cases, if areaways are required these must be added to foundation costs at a unit price for each areaway required. This seldom enters into preliminary quotations but it is easy to make an allowance therefor.

Many floor plans are designed for no basements. This does not mean that the plan is of no value if a basement is wanted. Individual choice should govern in this and many other ways. In most cases the service room provided on the first floor can be converted into a basement stair. Conversely, if the floor plan shows a basement stair, it will generally provide enough floor space for the service room.

The Holt-Rate for designs of non-basement homes gives the floor area and excavation in parenthesis to facilitate figuring the basement if wanted. In case a basement is wanted under part of the house only, it is a simple matter to ascertain the floor area and excavation for the desired basement and figure accordingly. In this case, the foundation walls will likely have to be figured as two items, one for the basement portion and the other for the unexcavated part.

### Excavation

The fourth figure, 60, gives the number of yards of excavating per foot of depth of excavation. Obviously, this varies according to the building site and style of architecture but it is a simple matter to multiply by the depth necessary and then by the excavating cost per yard. This is always based on excavating one foot larger on all sides of the house, as generally required everywhere.

### Foundation Cost Data

Unit costs of foundation walls and basement floors can be easily and accurately determined from the known cost of any basement in your locality, in this way:

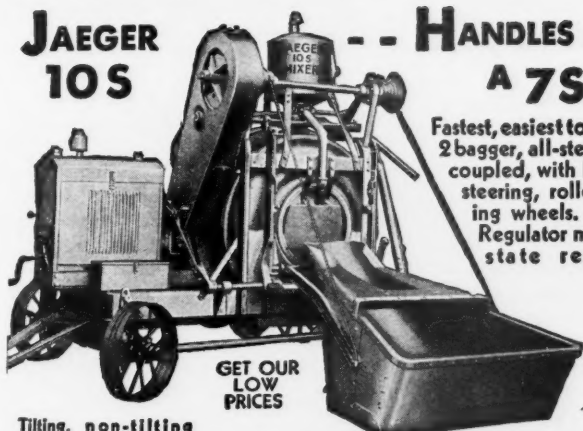
Suppose your records show that the material and labor required for the foundation walls of a house 30'x30' cost, say, \$300.00 at your present prices. Include building and razing forms if poured concrete. Dividing the \$300.00 cost by the 120 linear feet of wall provided, gives \$2.50 as the unit cost per linear foot of that particular size and kind of wall. Alternate sizes can be approximated very closely by figuring, say, \$1.35 for a wall half as high and 30 or 35 percent for a wall one-fourth as high. Of course, if your basic wall includes a footing, costs of lower walls will be proportionately higher if the same footing is used. Figuring the cross-section area of each wall will give the proper ratio exclusive of the overhead cost of laying out the foundation and establishing levels, which is usually the same regardless of wall height. Remember, also, the form costs are practically the same per linear foot of 8" wall as for 12" wall. Therefore, if your records segregate the form costs from the concrete, it is a small job to establish unit costs for foundations of all sizes. And, no records can beat your own actual records of completed work.

### Squares of Wall

The fifth or second from the last figure, 20, always gives the squares of wall to facilitate adding or deducting for change of wall specifications from your Standard Specifications for the Basic House. For instance, if you have figured 6" bevel siding or clapboards for the Basic House and brick veneer is wanted for this one, even though it shows stucco, it is only necessary to

(Continued to page 70)

## JAEGER 10S



GET OUR  
LOW  
PRICES

Tilting, non-tilting  
Mixers, Contractors  
Pumps, Placing Equip-  
ment. Send for catalog.

The JAEGER MACHINE Co.  
521 Dublin Avenue Columbus, Ohio

## -- HANDLES LIKE A 7S

Fastest, easiest to handle  
2 bagger, all-steel, short  
coupled, with knuckle  
steering, roller bear-  
ing wheels. Water  
Regulator meets all  
state require-  
ments.

## CORNELL FLOAT-OVER DOORS

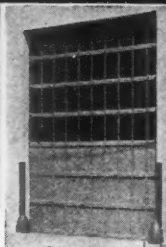
GALVANIZED  
TUBULAR

### STEEL DOORS

A really new  
achievement and  
as easy to lift  
as wood. Costs very  
little more. Notably  
sturdy. Burglar-  
proof. Fire-proof.  
Cannot warp or sag.



Write for Circular and Prices

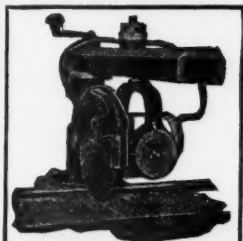


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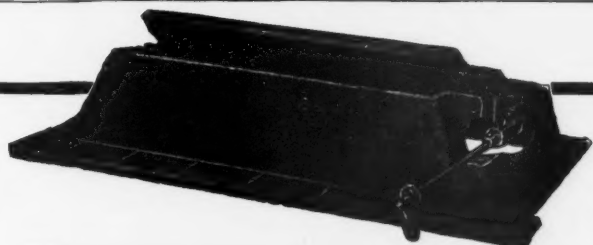
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Thousands in use by builders, car-  
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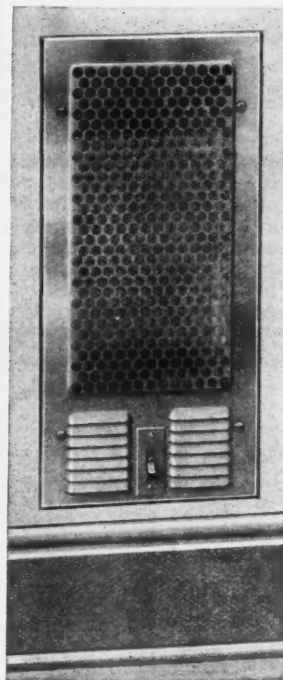
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*Frank Adam*

ELECTRIC COMPANY

ST. LOUIS  
Drawer 22

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Sheets, Heavy-Coated Galvanized  
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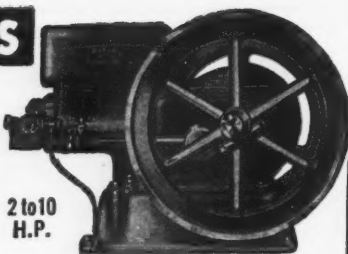
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H.P.

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SANDER**

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The American Spinner for sanding the edges of floors is a wonder—FLOORMEN—write for circular.

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**COLORCRETE INDUSTRIES, Inc.**

500 Ottawa Ave.

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Michigan

**"Cost-Key" Estimating**

(Continued from page 68)

multiply the 20 squares of wall by your difference per square between siding and brick veneer. In most cases this only involves figuring 100 square feet of wall surface with 6" siding, labor therefor and paint and comparing it with the cost of brick veneer for 100 square feet of surface or about 650 brick plus mortar and labor. It is very important that everyone in the building industry have their unit prices for various wall, floor and roof covering and the square is generally accepted as the best unit to adopt. It requires but a few minutes to compile your "unit price list" in cooperation with any dealer and then you will be ready to give an intelligent answer to all questions about comparative costs of various building materials in terms of the complete unit.

**Squares of Roof**

The last figure, 22, always gives the squares of roof so special roof covering can be quickly and easily figured accurately, as explained for walls. These wall and roof areas are given in even squares because the largest possible discrepancy of one-half square cannot amount to a great deal since it refers to the difference in cost per square only and it is easier to calculate difference in costs. In view of the fact that the human equation and the element of waste preclude any such thing as absolute accuracy in estimating, regardless of method used, a few dollars one way or another on a house is very immaterial to men who can sell houses.

The uniformity of "Holt-Rate Cost Keys" will enable you to decode quickly and easily figure all AMERICAN BUILDER home designs as explained by the following concrete example:

**Specimen Cost-Key Valuation**

In case your cost of the Basic House is \$2,120.00, according to your Standard Specifications, and that your foundation walls cost \$2.45 per linear foot, basement floors 15 cents per sq. ft. and excavation 50 cents per cubic yard, the house illustrated at bottom of page 53 would be figured as follows:

Superstructure, 1,695 x \$2.120	\$3,593.40
Foundation walls, 157 lin. ft. @ \$2.45	384.65
Basement floor, 1,470 sq. ft. @ 15c	220.50
Excavation, 60 x 5—300 yds. @ 50c	150.00
Built-in cabinets, allowance	350.00
Fireplace, (\$250.00 less \$100.00 for chimney)	150.00
Plumbing, allowance	500.00
Heating, allowance (furnace)	400.00
Lighting, allowance (inc. fixtures)	250.00
Driveways, sidewalks, landscaping, grading, etc., allowance	200.00
Total, per Standard Specifications	\$6,198.55
Add for stucco, 20 sqs. @ \$1.80	36.00
Add for "Blank" Shingles, 22 sqs. @ \$2.00	44.00
Add for special front door	50.00
	\$6,328.55

Note that the house is first figured according to Standard Specifications and, in this case, additions for stucco, alternate or special shingles and the special front door were then added. Do this ALWAYS. The unit prices are arbitrary of course but illustrate how you will proceed to estimate this Cost-Key way.

The first number of cost rate, covering the superstructure, includes the porte cochere and the proper number of doors and windows of the same kind and size as you figured for your Basic House. Blinds and flower boxes are not included in the Basic House, but the cost rate was increased the proper amount to provide for a pair of blinds and flower box under the dining room window. The cost rate is always adjusted to provide for the number of doors, windows, blinds and flower boxes shown by the picture or elevations and the floor plans.

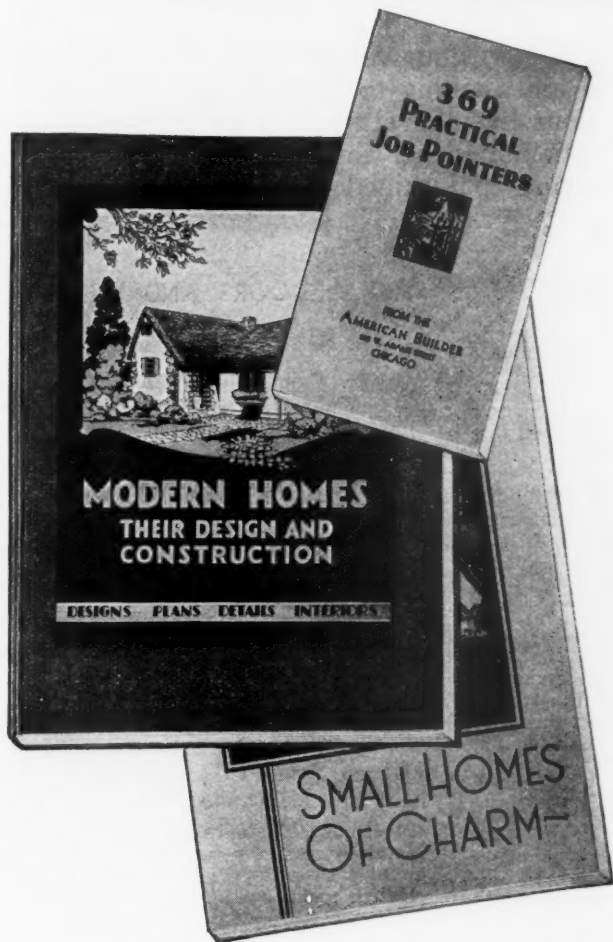
Assuming that your Standard Specifications included an ordinary square-top front door, and your cost of the special circle-top door shown is \$50 more for the complete unit, this difference must be added to cover the change from your standard front door. If a picture shows a more expensive door than your Basic House, add the difference in cost.

The built-in cabinets and other "variables" were included at arbitrary prices also. That these are easily figured ACCURATELY on a "basic-price" basis will be explained fully to dealers through the courtesy of Merchandising Council of their association. ASK YOUR LUMBER DEALER for further information about this and any other phase of Cost-Key estimating.



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A "job kink" reference book compiled from the actual experiences of scores of practical men—contractors, architects, carpenters, masons, shop foremen, and others. A book of unique time, labor and money saving ideas, for the use of the skilled craftsman or designer. Every "pointer" illustrated and described in simple, non-technical terms. A handy, helpful book.

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# Selected List of Manufacturers' Literature

## For the Service of Builders, Contractors, Architects and Dealers

THE publications listed on these pages may be obtained without charge either by using the coupon, listing the numbers of the catalogs desired and mailing to AMERICAN BUILDER, 105 West Adams Street, Chicago, or by applying on your business stationery to the manufacturers direct, in which case kindly mention this publication. Either the titles or the numbers may be used in ordering. This list is an editorial feature maintained for the convenience of our readers.

### CONCRETE AND MONOLITHIC CONSTRUCTION.

METAL FORMS CORP., 3334 N. Booth St., Milwaukee, Wis.

319—Forms, Metal—"Metaforms" for Building Construction." Booklet describing steel forms for building concrete walls and buildings.

STAR EXPANSION BOLT CO., 147 Cedar St., New York City

322—Bolts, Anchors—"Catalogue No. 413." 36-page booklet listing all sizes and descriptions of all products and covering all types of expansion bolt products and drilling devices.

"TIE-TO" INSERT CO., 2140 S. Layton Blvd., Milwaukee, Wis.

323—Anchors for Frame Construction—"Veneer Anchors." A 1-page convenient filing bulletin, illustrated, giving technical and cost data.

### ROOFING, SHEET METAL AND SKYLIGHTS.

BIRD & SON, INC., E. Washington St., East Walpole, Mass.

340—Shingles—"The House That Bird Builds." 24-page booklet describing shingles, roll roofings, insulating products, building papers, cements and roof coatings made by Bird & Son.

H. H. ROBERTSON CO., Pittsburgh, Pa.

346—Ventilators—"The Robertson Ventilation Data Book." 50-page catalog giving description of gravity-type ventilators, with unique ventilation tables.

AMERICAN SHEET AND TIN PLATE CO., Pittsburgh, Pa.

354—Steel, Stainless—"American USS Stainless and Heat Resisting Steel Sheets and Light Plates." A 24-page booklet descriptive of these high grade stainless alloys for trim and fine sheet metal work.

THE AMERICAN ROLLING MILL CO., Middletown, Ohio

363—Plates, Iron—"Pure Iron Plates for Long Service." Booklet describing the physical and chemical properties of ingot iron.

### STEEL AND METAL WORK

BETHLEHEM STEEL CO., Bethlehem, Pa.

365—Joists, Steel—"Mac Mar Steel Joists." This 20-page booklet illustrates the uses of such steel joists; also contains drawings and illustrations of safe loads, etc., and pictures of buildings which have used this fire-safe construction.

JONES & LAUGHLIN STEEL CORP., Pittsburgh, Pa.

367—Channels, Steel—"J & L Light Weight Channels, for Stair Stringers and Other Uses." 4 pages illustrated, including engineering data on this section in both the 10", 8.4 lb., and 12", 10.6 lb. sizes.

UNION METAL MFG. CO., Canton, Ohio

372—Columns, Steel—"Ancient Beauty for Modern Buildings." 40-page illustrated catalog showing attractive column entrances with full descriptive and engineering information.

WICKWIRE BROTHERS, Cortland, N. Y.

373—Wire Cloth—"Wickwire Products." 24-page catalog describing and illustrating screen wire cloth, steel, bronze and copper and other products of this company.

LANEBRO MANUFACTURING CO., INC., Poughkeepsie, N. Y.

374—Bridging, Steel—"3-TY Steel Bridging." Circular containing 6 illustrations showing application of 3-TY steel bridging.

ALUMINUM COMPANY OF AMERICA, 1820 Gulf Bldg., Pittsburgh, Pa.

380—Sills, Aluminum Window—"Window Sills for Modern Buildings." A folder especially for architects and specification writers, giving dimensions and details of aluminum window sills.

### ELECTRICAL.

VICTOR ELECTRIC PRODUCTS, INC., 740 Reading Rd., Cincinnati, Ohio

381—Clock, Electric—"Victor In-Bilt Electric Clock." 4-page folder showing various applications, detail drawings and giving installation instructions.

### SPECIAL DOORS AND WINDOWS.

McKEY DOOR CO., 6224 S. Oakley Ave., Chicago, Ill.

400—Doors, Garage—"McKey Overhead Garage Doors." 8 pages of detailed information on garage design and the installation of modern garage doors.

OVERHEAD DOOR CORP., Hartford City, Ind.

403—Doors, Garage—"No. 16 Catalog." 24-page illustrated catalog showing installation of the "Overhead Door" in homes, filling stations, public garages, and warehouses.

MILCOR STEEL CO., 4111 W. Burnham St., Milwaukee, Wis.

404—Doors, Metal Access—"Milcor Metal Access Doors." An illustrated circular showing the inconspicuous but efficient metal access door.

### CARPENTRY.

BROWN COMPANY, Portland, Maine.

409—Solka—information regarding Solka base pure cellulose for roofing felt. Interesting test data on non-tearable asphalt roofings.

THE CROMAR CO., Williamsport, Pa.

410—Flooring, Oak—"Cromar Oak Floors." A 20-page booklet covering factory-finished oak flooring in a general way. Contains complete information and many illustrations.

FORDYCE CROSSETT SALES CO., 80 E. Jackson, Chicago, Ill.

411—Flooring, Pine, Oak, Hardwood—"Do You Know We Can Ship the Following in Mixed Cars?" A circular listing the different items manufactured by our mills which can be shipped in mixed cars.

LONG-BELL LUMBER SALES CORP., R. A. Long Bldg., Kansas City, Mo.

417—Frames, Window—"And Now Long-Bell Airtite Frames." 4-page folder, illustrated in two colors, featuring frame with inter-locking joints which affords maximum resistance to weather and offers satisfaction as to durability and economy.

PERFECTION OAK FLOORING CO., Shreveport, La.

418—**Flooring, Oak**—"How to Have Lovely Floors In Your Home." 4-page folder setting forth advantages of using Frostbrand oak flooring.

W. M. RITTER LUMBER CO., Columbus, Ohio

419—**Flooring**—"Ritter Oak Flooring." Information regarding the installation and care of Oak flooring. Contains 34 pages; shows buildings in which Ritter Appalachian Oak flooring was laid; 13 detailed cuts installing and finished floors.

CELOTEX Co., 919 N. Michigan Ave., Chicago, Ill.

423—**Ornaments, Moldings**—"Catalog of Celotex Moldings and Ornaments." 12-page folder showing patterns available; also finished walls and ceilings of Celotex carved and grooved, and decorated with mouldings, ornaments and tiles.

ROCKWOOD GYPSUM CORP., 509 Security Bldg., St. Louis, Mo.

428—**Partitions**—"Build of Rockwood, Not Firewood." Six pages cover 17 cuts. Describes fireproof wall, partitions, floor sections and complete gypsum, concrete construction of small houses also fireproofing, roofing for large structures.

ANDERSEN FRAME CORP., Bayport, Minn.

429—**Frames, Window**—"Andersen Master Frames with Locked Sill-Joint." Illustrated folder with details showing special leakproof and weathertight construction of Andersen Master Frames for studding wall, brick veneer and solid masonry wall construction.

N. S. W. COMPANY, 2137 Gratiot Ave., Detroit, Mich.

432—**Window Units**—"N. S. W.—Better Windows." 4-page circular showing adaptability of Non Stick window construction to various walls, complete weather-tight window sold and installed as unit.

LAMELLA ROOF SYNDICATE, INC., 45 W. 45th St., New York City

441—**Trusses, Roof**—"The Lamella Roof." 28-page catalog with 40 figures giving description of Lamella roof with illustrations of its application.

## FURRING AND LATHING.

E. L. BENEDICT AND ASSOCIATES, Union Trust Bldg., Pittsburgh, Pa.

445—**Lath, Metal**—"Ribbed Steeltex Lath for Plaster." Catalog describing 2" x 2" mesh of 16 ga. electrically welded, copper-bearing, galvanized wire, to which is attached a heavy fibrous backing by means of a 26 ga. rib stiffener.

CELOTEX Co., 919 N. Michigan Ave., Chicago, Ill.

447—**Lath**—"Stop That 'Handwriting on Your Wall'!" 6-page folder covering practicability of Celotex lath which provides protection of insulation and a superior plaster base.

MADE-RITE PRODUCTS Co., St. Louis, Mo.

454—**Plaster**—"Keenite Decorative Keene's Cement Plaster." 4-page folder showing cuts of Keenite in various finishes, and photographs of residences.

## 25. PAINT, PAINTING AND FINISHING.

BREINIG BROS., INC., Third & Grand Sts., Hoboken, N. J.

484—**Paint**—"Paint Products Description Catalog." Gives a description of paints, varnishes, enamels, stains and waterproofing.

CASEIN MFG. CO. OF AMERICA, INC., 205 E. 42nd St., New York City

485—**Filler, Wall**—"Casco Wall Sealer." 4-page folder describing Casco wall sealer, users to whom it is suited; and uses.

THE CROMAR Co., Williamsport, Pa.

486—**Varnish**—"Withstanding the Constant Wear of Heavy Foot Traffic." A 4-page folder describing Tone-Phlex penetrating varnish. Also contains directions for application and a list of individuals and institutions which have used it.

ENTERPRISE PAINT MFG. CO., 331 S. Peoria, Chicago, Ill.

487—**Paints**—Information regarding Enterprise Kuick-Dri house paints sold through retail lumber dealers.

GLUKOTE Co., 1225 University Ave., St. Paul, Minn.

488—**Kameo**—"Kameo Kote Folder." Describes interior flat self-sizing washable and odorless paint.

A. C. HORN COMPANY, Hancock & Bodine Sts., Long Island City, N. Y.

490—**Paints, Varnishes**—Information on paints, varnishes, waterproofings, damp-proofings, floor treatments, and specialties with detailed specifications, uses and colors.

## HARDWARE.

SARGENT & Co., New Haven, Conn.

516—**Hardware, Builders**—Information on complete line of locks and builders hardware offered by this company.

AMERICAN CHAIN CO., INC., 929 Connecticut Ave., Dept AB, Bridgeport, Conn.

517—**Chain, Sash**—"American Sash Chain and ACCO No. 8 Sash Chain." 4-page folder showing illustrations of American sash chain with complete instructions on attaching fixtures, also covers ACCO No. 8 Sash Chain for smaller buildings.

## POWER EQUIPMENT.

WITTE ENGINE WORKS, Kansas City, Mo.

754—**Engines**—Catalog No. 56 describes the complete line of Witte Engines, 2 to 10 H.P. and up to 30 H.P. All with Timken Roller Bearings and Self-oiling.

BUCYRUS-ERIE Co., South Milwaukee, Wis.

765—**Excavator**—Illustrated bulletin features new 10-B excavator,  $\frac{3}{4}$  cubic yard shovel, drag line, clam shell, lifting crane, drag shovel, skimmer, pile driver, back filler.

(May, 1934)

American Builder,  
105 W. Adams St.,  
Chicago, Ill.

Please have the following Catalogs listed in this issue sent me—

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I also desire further information about the following products advertised  
in this issue.....

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Street.....

City..... State.....

Occupation.....



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6" jointer and 8" circular  
rip and crosscut saw.  
Without Motor  
**\$247**

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Minimum twenty words.

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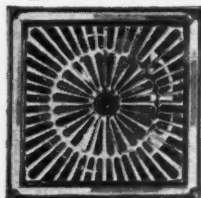
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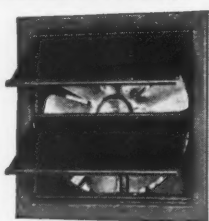
ATTENTION CABINET SHOPS AND HOME MECHANICS. Send ten cents stamps for catalog unusual cabinet hardware and furniture fittings. Chest trimmings, costumer hooks, dowels, hinges, supports, braces, pulls, casters, knobs, upholstering supplies, finishing materials, smoker trimmings, electric cluster, chair cane, electric clock movements, etc. THURSTON SUPPLY COMPANY, Anoka, Minnesota.

WANTED—Manufacturers representatives who have contact with laundries, hotels, hospitals and similar institutions who wish to add a line of institutional laundering equipment. Address Box 5-34, American Builder and Building Age.

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Quality  
Electric  
Ventilator



Add to your profit, and make satisfied customers by installing this dependable electric ventilator at the time of building, saving the customer expense later on. Makes houses much easier to sell. Easiest to install of any ventilator. All-steel construction, completely rustproof. Beautiful chrome-plated grill.

Write for  
Circular  
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Write for our sensationally low price to builders.  
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Complete working drawings in blueprint form have been included for a 5 and 6-room New England house, 6-room Colonial Cottage and a 5-room English Cottage. Specifications and bills of material are given in each case.

114 pages, 206 illustrations, 9x12 inches, paper, \$1.50

**American Builder and Building Age**  
30 Church Street New York

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## NOTICE TO ADVERTISERS

Forms for the June Number of the American Builder and Building Age will close promptly on May 15. New copy, changes, order for omissions of advertisements must reach our business office, 105 W. Adams St., Chicago, not later than the above date. If new copy is not received by the 15th of the month preceding date of publication the publishers reserve the right to repeat last advertisement on all unexpired contracts.

AMERICAN BUILDER AND BUILDING AGE.